

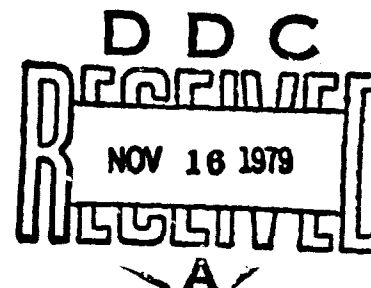
Research Problem Review 77-2

LEVEL #

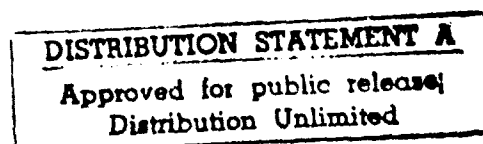
(ms)

SURVEY FEEDBACK IN COMBAT UNITS IN THE U.S. ARMY IN EUROPE: A PILOT PROJECT

AD A 076693



U. S. Army



Research Institute for the Behavioral and Social Sciences

REPRODUCED FROM
BEST AVAILABLE COPY

July 1977

Approved for public release; distribution unlimited.

79 11 15 227

DDC FILE COPY

U. S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency under the Jurisdiction of the
Deputy Chief of Staff for Personnel

J. E. UHLANER
Technical Director

W. C. MAUS
COL, GS
Commander

Research accomplished
under contract to the Department of the Army

Cambridge Communications Group, Inc.

NOTICES

DISTRIBUTION: Primary distribution of this report has been made by ARI. Please address correspondence concerning distribution of reports to: U.S. Army Research Institute for the Behavioral and Social Sciences, ATTN: PERI-P, 5001 Eisenhower Avenue, Alexandria, Virginia 22333.

FINAL DISPOSITION: This report may be destroyed when it is no longer needed. Please do not return it to the U.S. Army Research Institute for the Behavioral and Social Sciences.

NOTE: The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

Army Project Number
2Q762722A765

Organizational
Effectiveness

(14) ARI-RES PROBLEM/REV-77-2
Research Problem Review 77-2

(6) SURVEY FEEDBACK IN COMBAT UNITS IN THE
U.S. ARMY IN EUROPE: A PILOT PROJECT

(10) Douglas S./Holmes, Harold C./Strasel,
Charles/Cosentino

Gerald C./Leader Arthur J./Daltas and Michael A. [unclear]

Submitted by:
William E. Haythorn, Chief
ARI FIELD UNIT, USAREUR

(11) Jul 1977

(12) 92

Approved by:

E. Ralph Dusek, Director
Individual Training & Performance
Research Laboratory

J. E. Uhlaner, Technical Director
U.S. Army Research Institute for
the Behavioral and Social Sciences

Research Problem Reviews are special reports to military management. They are usually prepared to meet requests for research results bearing on specific management problems. A limited distribution is made - primarily to the operating agencies directly involved.

A005 215
FOREWORD


A028 241
A020 934

The Army Research Institute for the Behavioral and Social Sciences (ARI) has been a leader in research on the expansion of human performance capabilities for effective operation in military units and the improvement of soldier and team performance, motivation, and job satisfaction through the design and utilization of techniques associated with organizational effectiveness (OE) - one aspect of the area that psychologists term organizational development (OD). Some results of the research were reported in ARI Research Report 1180, Technical Papers 272 and 275, and Research Problem Review 75-1. NH

In June 1972, the Army initiated a program of five pilot projects to test the operational potential of the OD techniques of survey feedback, management of objectives, job enrichment, team building/awareness training, and assessment center. The survey feedback pilot project, the subject of the present report, was conducted in combat units of the U.S. Army in Europe (USAREUR), 1973 through June 1975. The Army further strengthened OE and began institutionalization by establishing the Organizational Effectiveness Training Center on 1 July 1975 to train OE Staff Officers (OESO). Armywide implementation of OE programs began May 1976.

A number of people have contributed to the survey feedback pilot project. LTC Ramon Nadal and Major Fred Schaum represented the Department of the Army in the initiation of the project; LTC Richard Powell, Major John McManners, and Major William Tyler (ODCSPER-USAREUR) aided the project in Europe. In 1973-1974, under Contract DAHC 15-73-C-0067, the Cambridge Communications Group, Inc., with Dr. Scott M. Cunningham as project leader, constructed and developed most items of the initial survey questionnaire for applying survey feedback in USAREUR. In 1974 the newly established ARI Field Unit in USAREUR assumed responsibility for final development of the survey questionnaire and administration of the pilot project.

The research reported in the present publication was accomplished jointly by personnel of ARI and the Cambridge Communications Group under Army Project 2Q762722A765, with the cooperation of the Office of the Deputy Chief of Staff for Personnel (ODCSPER), USAREUR, and Seventh Army. The research should be considered a pilot effort in the now broader OE program. Additional questionnaires have been developed in other projects, and OESOs now have a wider choice, including the Work Environment Questionnaire (WEQ) developed by ARI and the ADMINCEN Survey developed by the Army Administration Center, Fort Benjamin Harrison, IN.


J. E. UHLANER
Technical Director

**SURVEY FEEDBACK IN COMBAT UNITS IN THE U.S. ARMY
IN EUROPE: A PILOT PROJECT**

BRIEF

Requirement:

To provide information on actual and potential value of a survey feedback system in USAREUR, by assessing its effectiveness, feasibility, and acceptability; and to develop suitable materials and procedures for an operational survey feedback system.

Problem:

Organization Development (OD) is a widely used industrial technology which combines and applies methods of behavioral science and management science. Its purpose is to reinforce organizational strengths and to make practical and systematic improvements in the way an organization functions. The Department of the Army desired to test major OD techniques - in this case, survey feedback - for use within the Army.

Approach:

✓
The survey feedback pilot project provided a recurring structured sequence to 60 companies, after an initial briefing in June 1974. Troops responded to a survey questionnaire. Feedback of troop responses was provided to company commanders and summarized feedback to battalion commanders. Commanders were encouraged to meet with subordinates to plan action responses. The sequence was repeated four times at quarterly intervals between June 1974 and April 1975. Company commanders were trained to use the survey data in a four-step OE cycle of diagnosis, action planning, action, and evaluation. Survey questionnaire items were related to leadership, organizational climate, job satisfaction, administrative functions, and training activities. A training manual for commanders and software for presenting feedback were developed. —

Effects were determined by comparing the 60 companies that received feedback with 15 companies that had completed the survey questionnaire but had not received feedback. Sources of research data included the survey responses, unit indicators (e.g., AWOL, Article 15's), evaluative questionnaires completed by participants, and interviews with participating commanders.

Findings:

➤ Measures of unit improvement - unit indicators - did not indicate that the survey feedback system had produced any significant change. However, responses to survey questionnaire items, particularly by E1-E4s, became more positive over time in companies receiving feedback. <

Both commanders and enlisted men endorsed operational use of survey feedback:

70-80% of the leaders recommended its use.

53% of E5-E8s and 39% of E1-E4s reported it could be helpful.

52% of E5-E8s and 41% of E1-E4s reported they liked completing the questionnaire for their commanders.

Commanders expressed the opinion that full use of survey feedback and the four-step cycle required more time than was available in the operational environment in USAREUR at the time of the pilot project. The amount of time that unit commanders could devote to actions based upon the feedback conflicted with the time required to meet priorities established at higher levels. Commanders also felt that maintaining confidentiality could become a serious problem in the operational use of survey feedback. A constructive, problem-solving attitude by leaders was considered essential to the technique's success.

Some commanders found survey feedback valuable to unit operations during the project. Many company commanders considered the feedback process useful in promoting insight and communication.

Utilization of Findings:

The Army began implementing Organizational Effectiveness (OE) programs derived directly from OD principles immediately after the survey feedback pilot project ended in July 1975.

Survey feedback is one tool in the armamentarium of OE tools. It can provide an organizing structure for all other OE activities at the unit level. By its nature, the technique can be applied in the decentralized manner essential to management tools in the Army. Almost automatically, survey feedback tailors itself to the requirements of a given organization and the special needs of the different chains of command.

Reactions of commanders indicated some changes during the project and that some actions extended beyond the period of the research. This normal process of adjustment and change would be expected to continue if survey feedback were conducted over a longer term and in conjunction with other OE techniques.

Increased insight and communication from survey feedback could contribute substantially to meeting the Army's commitment to foster an organizational climate in which unit personnel are actively improving unit performance.

SURVEY FEEDBACK IN COMBAT UNITS IN THE U.S. ARMY
IN EUROPE: A PILOT PROJECT

TABLE OF CONTENTS

	Page
BACKGROUND	1
Current Status of OD in the Army	1
Survey Feedback Pilot Project	2
Objectives	3
CONDUCT OF THE PILOT PROJECT	5
Administration of Survey Questionnaires	5
Initial Survey Feedback Training	7
Scheduling of Feedback Meetings	10
Survey Feedback Materials Used by Commanders and Troops	10
RESEARCH DESIGN FOR EVALUATION	14
Subjects	14
Feedback Variations	14
Feedback Groups	16
Sources of Research Data	17
Types of Statistical Analysis	21
RESEARCH OUTCOMES	22
Opinions and Perceptions	22
Measures of Unit Improvement	31
Diagnoses and Actions Based on Survey Feedback	36
Implementation of the OE Cycle by Commanders	39
Reactions to the Pilot Project Administration and Materials	44
SUMMARY AND CONCLUSIONS	51
REFERENCES	53

	Page
APPENDIX A. Survey Questionnaire	A-1
B. Summary of Interviews With Battalion Commanders at Conclusion of Project	B-1
C. Mean Responses of Enlisted Men, by Item by Quarter by Condition, to the Survey Questionnaire	C-1
D. Means and Significance Tests for Unit Indicators over Quarters and Feedback Groups	D-1

LIST OF FIGURES

Figure 1. Diagram of the OE cycle	4
2. Sequence and Dates of Survey Feedback Pilot Project Activities	6
3. Goals, Objectives, and Topics for Company Commanders' Initial Training	8
4. Schedule for First Day of Company Commanders' Training	9
5. Survey Feedback Summary Data Sheet Display Example . .	13
6. Example of a Unit Planning Record	15
7. Unit Indicators	19
8. Survey Questionnaire, Evaluative Questionnaires, and Interviews	20
9. Mean Scores by Quarter for Enlisted Men in Feedback and No-Feedback Conditions	32

LIST OF TABLES

	Page
Table 1. Questionnaire Responses of Company and Battalion Commanders: Desire to Continue Survey Feedback Operationally	24
2. Questionnaire Responses of Enlisted Men: Influence of the "System" on Survey Feedback	26
3. Questionnaire Responses of Battalion Commanders: Usefulness of Survey Feedback	26
4. Questionnaire Responses of Company Commanders: Usefulness of Survey Feedback	27
5. Questionnaire Responses of Company Commanders: Survey Feedback as a Learning Experience	29
6. Questionnaire Responses of Enlisted Men: Perceived General Value of Survey Feedback	30
7. Questionnaire Responses of Enlisted Men: Potential Effects of Survey Feedback	30
8. Mean Scores in Feedback and No-Feedback Conditions for E1-E4s and E5-E8s, by Quarter	33
9. Mean Scores for E1-E4s and E5-E8s by Feedback Variations, by Quarter	33
10. Mean Scores for E1-E4s and E5-E8s in Feedback Groups I and II, by Quarter	34
11. Mean Responses to Survey Questionnaire by Feedback Variation	35
12. Questionnaire Responses of Company Commanders: Personal Commitment to Survey Feedback Project	40
13. Questionnaire Responses of Company Commanders: Extent and Value of Survey Feedback Meetings	41
14. Questionnaire Responses of Enlisted Men: Amount of Feedback	43
15. Questionnaire Responses of Enlisted Men: Perceptions of Commanders' Use of Survey Data	44

Table 16.	Percentage of Survey Questionnaire Response Sheets Discarded at Quarter 3 Data Collection	45
17.	Number of Enlisted Men Providing Valid Responses to the Survey Questionnaire, by Quarter	45
18.	Questionnaire Responses of Enlisted Men: Belief in the Confidentiality of Their Survey Questionnaire Responses	47
19.	Questionnaire Responses of Enlisted Men: Feelings About Completing the Survey Questionnaire	47
20.	Questionnaire Responses of Company Commanders: Perceived Value and Relevance of Initial Training Sessions	48
21.	Questionnaire Responses of Company and Battalion Commanders: Perceptions of Accuracy of Troop Responses to Survey Questionnaire	48
22.	Questionnaire Responses of Enlisted Men: Reported Honesty of Survey Questionnaire Responses	50
23.	Mean Ratings by Company Commanders of Value of Individual Survey Questionnaire Items	50

SURVEY FEEDBACK IN COMBAT UNITS IN THE U.S. ARMY IN EUROPE: A PILOT PROJECT

BACKGROUND

In 1972 the Department of the Army, through the Motivational Development program, initiated pilot projects in organizational development (OD) to test the techniques of survey feedback, management by objectives, job enrichment, team building/awareness training, and assessment center. Objectives of the overall program were to (1) obtain data from which the adaptability and effectiveness of each technique could be determined; (2) integrate the results obtained for each technique to insure that implementation would be conducted within an overall plan; (3) insure that operational innovations would be compatible with Army leadership and management doctrine, instruction, and training; (4) contribute to formulation of Army policy and research, especially in areas of leadership and personnel management; (5) increase the number and improve the utilization of Army personnel who receive special education and training in the field of Organizational Development; and (6) selectively implement the extended application of those techniques which demonstration and research determined to be relevant to Army operations.

CURRENT STATUS OF OD IN THE ARMY

The pilot projects indicated that OD could be adapted to the Army, and a specifically military adaptation known as Organizational Effectiveness (OE) has been developed. HQDA Letter 600-76-2* defines both concepts:

Organizational Development (OD): A technology which involves the combined application of behavioral and management sciences methods: (1) to understand more clearly how persons in an organization communicate with each other and how they affect and are affected by the structures, procedures, and work environments of the organization, and (2) to use this knowledge and understanding to reinforce organizational strengths and make practical and systematic improvements in the way the organization functions.

* HQDA Letter 600-76-2, 3 May 1976, subject Organizational Effectiveness (OE): Activities and Training.

Organizational Effectiveness (OE). A systematic adaptation of OD by the Army for the purpose of strengthening the chain of command, increasing individual and unit effectiveness, and improving the quality of life in an Army community. OE is implemented as a phased process that is tailored to the unique requirements of a particular Army unit, controlled by that unit's leader or commander, and normally supported by an Organizational Effectiveness Staff Officer. The primary steps of OE include:

- (1) Assessment of organizational processes.
- (2) Chain of command action planning.
- (3) Implementation of planned actions.
- (4) Evaluation and follow-up.

The pilot projects showed a need for specialized staff assistance to provide technical support to unit leaders. As a result, the Organizational Effectiveness Training Center (OETC) opened in July 1975 at Fort Ord, CA, to train OE staff officers. At the end of the 16-week course, officers are assigned to Army units where they serve as facilitators and consultants to commanders who desire to employ OE technology.

The Human Resources Development Directorate of the Office of the Deputy Chief of Staff for Personnel is currently responsible for the application of OE technology in the Army. The U.S. Army Administration Center at Fort Benjamin Harrison, IN, serves as the proponent for developing OE doctrine and training.

SURVEY FEEDBACK PILOT PROJECT

The survey feedback pilot project was conducted in combat units of the U.S. Army in Europe (USAREUR). The present Research Problem Review presents an account of this pilot study and its results, particularly as they are relevant to the further development and use of the survey feedback technique.

Battalion and company commanders were briefed on the project by a senior scientist from the Army Research Institute for the Behavioral and Social Sciences (ARI) several weeks prior to the first quarter data collection. The following points were emphasized: (1) The Deputy Commander in Chief was personally interested in the project. (2) At his instruction, confidentiality of survey results would be required. (3) Maximum turnout of troops to answer the survey questionnaire was necessary both for benefits to be realized by commanders and for research purposes.

Description of Survey Feedback. In civilian terms, attitude surveys are traditionally administered to employees and results are provided to management. Survey feedback is an OD technique in which results are provided to employees in addition to management.* Responsibility for dealing with problems identified in the survey is shared by management and employees. Discrepancies between survey results and organizational objectives are thought to motivate personnel to become committed to constructive organizational changes. Feedback meetings among organizational members provide an opportunity to diagnose organizational problems and to develop strategies and detailed plans for attack. In such meetings, when subordinate members meet with their superior, problems identified by the survey may be addressed directly. Other related problems more salient to the group that is meeting may surface and be worked on. An outside consultant can facilitate problem-solving at the meetings and can relate processes and outcomes to an existing larger strategy for organizational change. Presentation of survey results to employee respondents as well as to managers and their immediate subordinates serves to convey the message that management is aware of, and is working on, those problems most important to employees.

In military terms, survey feedback is the final part of four steps of the OE cycle: problem diagnosis, action planning, action, evaluation of outcomes (Figure 1). A survey feedback program can also function as a framework on which to develop an OE program.

OBJECTIVES

The pilot project reported here had two major purposes, to provide evidence about the value - both realized and potential - of survey feedback in combat units in USAREUR and to develop materials and procedures suitable for use by company commanders in an operational survey feedback system in USAREUR.

* French, W. L., and Bell, Ch. H. Organization Development. Englewood Cliffs, N. J.: Prentice-Hall, 1973.

Huse, E. F. Organization development and change. New York: West Publishing Co., 1975.

Friedlander, F., and Brown, L. D. Organization Development. In M. R. Rosengweig and L. W. Porter (Eds.), Annual Review of Psychology (Vol. 25), Palo Alto, CA., 1974.

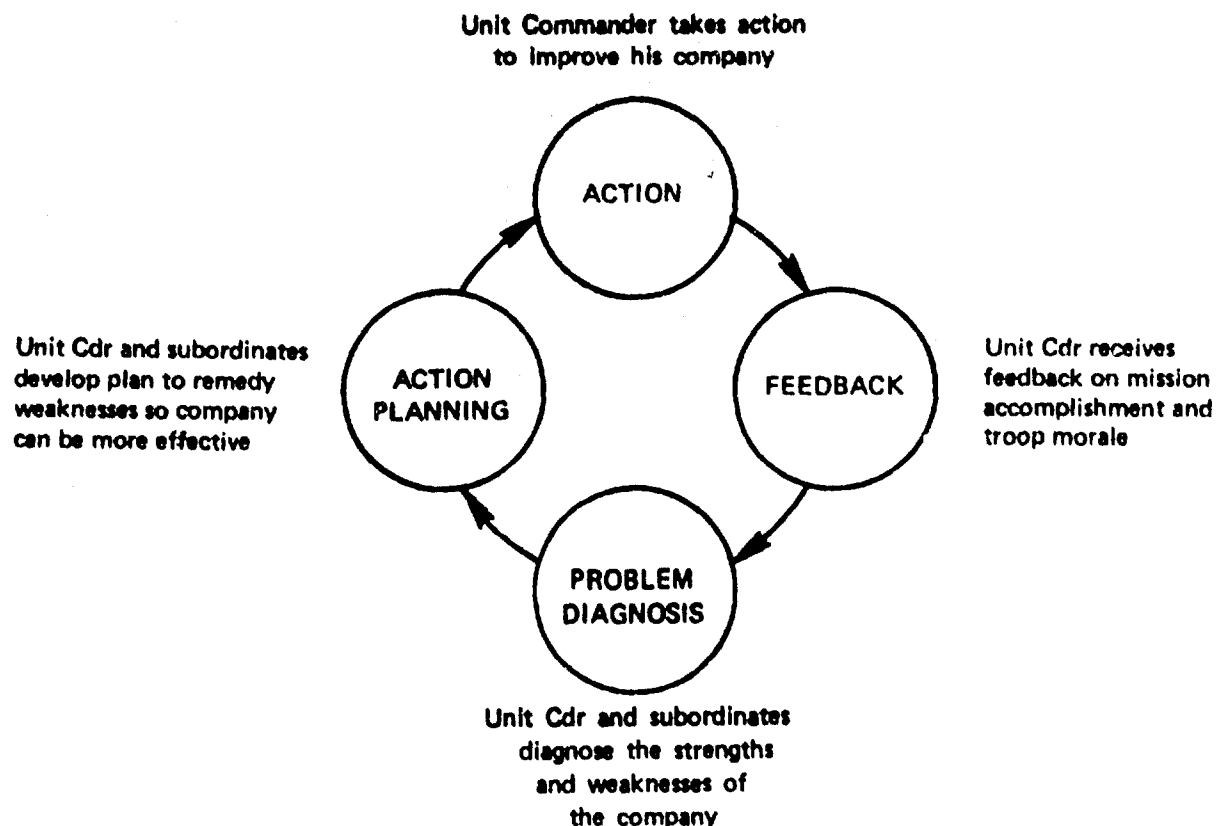


Figure 1. Diagram of the OE cycle

In this report, the technical section that follows describes in considerable detail the conduct of the pilot project, with emphasis on individual and group communication among operational personnel and between operational and research personnel. Collection of data integral to the survey feedback technique and of data evaluative of the feedback process is described. Results of the data analysis are presented with respect to each major aspect of the research and to some minor aspects. The objective was to show the reader exactly what was done, under what conditions, what impact the project had on the military organizations participating, and how in turn the conduct of the research project was affected by the special and continually changing military environment in which the feedback cycle operated.

CONDUCT OF THE PILOT PROJECT

Especially developed survey questionnaires were administered four times at 3-month intervals to enlisted men in 75 USAREUR combat arms companies and batteries in 15 battalions during June 1974 through April 1975 (see Figure 2). Feedback was provided several weeks after each questionnaire administration to commanders of 60 companies, who were also given training in interpretation of the survey data and asked to engage in a structured sequence of meetings and activities. Concurrently, their battalion commanders received feedback of battalion-wide averages of the survey results. Feedback was not provided to commanders of 15 companies. These 15 companies served as a control group for the pilot project.

ADMINISTRATION OF SURVEY QUESTIONNAIRES

Survey questionnaires were administered to the troops by researchers. Battalion personnel arranged for troops to convene in the most suitable location (mess hall, gymnasium, or auditorium) one company at a time, with one make-up session. The questionnaire administrator explained the purpose of the questionnaire and how to complete it accurately. He answered questions concerning procedures, then handed out the questionnaires, response sheets, and pencils. Response sheets were placed in stacks on a table as personnel finished the survey.

Response sheets believed to be invalid were discarded. Invalid response sheets were generally those that were completed with an obviously artificial or illogical pattern of responses, completed too quickly for questions to have been read, or those on which no demographic items had been completed and only a few of the other items. Response sheets were retained in which demographic items appeared to be completed conscientiously while all other items were responded to in the extreme negative direction.

At Quarter 2, 50% fewer troops were made available to complete the questionnaire than at Quarter 1. The Deputy Commander in Chief sent a message to the field that resulted at Quarters 3 and 4 in turnouts comparable to those for Quarter 1.

1. On-site visits, briefing of battalion and company commanders about survey feedback project, June 1974
2. Quarter 1 administration of survey questionnaire to troops; collection of unit performance data (unit indicators), June 1974
3. Feedback of survey data, and training of commanders in how to use it, primarily July 1974 (about 35 days after data collection)
4. Mail out evaluative questionnaires to commanders, August 1974
5. Quarter 2 survey questionnaire administration; collection of unit performance data, September 1974
6. Quarter 2 feedback, primarily in October 1974 (about 24 days after data collection)
7. Quarter 3 survey questionnaire administration; collection of unit performance data, primarily in December 1974
8. Quarter 3 feedback, January 1975 (about 42 days after data collection)
9. Mail out evaluative questionnaires to commanders, February 1975
10. Quarter 4 survey questionnaire administration, followed by evaluative questionnaire; collection of unit performance data, primarily April 1975
11. Quarter 4 feedback, primarily April 1975 (about 24 days after data collection)
12. Mail out evaluative questionnaires to commanders, May 1975
13. Mail out forms for evaluating individual survey questionnaire items and the feedback materials to commanders, May 1975
14. Mail out evaluative questionnaires to battalion commanders, May 1975
15. Evaluative interviews conducted on-site with commanders and key subordinates, primarily June 1975

Figure 2. Sequence and Dates of Survey Feedback Pilot Project Activities.

INITIAL SURVEY FEEDBACK TRAINING

Commanders scheduled to receive feedback from a civilian scientist received on-site training in how to use it at the time of Quarter 1 feedback (primarily July 1974). Commanders were asked, prior to training, to read the Organizational Survey Feedback Manual,* which describes the approach, procedures, and materials to be used with survey feedback. The manual, training, and the structured sequence of meetings were designed to teach the OE cycle and to generate participation and involvement in the problem-solving process associated with survey feedback. Thus, trainers attempted to motivate commanders to work with their data as a group, to involve their battalion commanders in the OE cycle, and to share data with subordinate leaders.

The company commanders met as a group for training for a day and a half to two days in a private setting such as a conference room. After explaining the survey feedback system, trainers distributed feedback printouts for each company; within the general framework, trainers tailored the sessions to the individual and group needs of the commanders present. They began by discussing their own and the commanders' expectations and preparations for the project, and they learned how each commander felt about using survey feedback in his unit. They attempted to reinforce healthy scepticism as appropriate and to learn the reasons for the more negative attitudes, as well as to increase commanders' awareness of the sources of such attitudes.

The general content of the company commanders' initial training is shown in Figure 3; Figure 4 shows how it was incorporated in the first day's schedule. On the second day or half day of training, each group of company commanders worked in its preferred way with the survey data and diagnostic process. Training and assistance in subsequent quarters varied according to the research design.

* Organizational Survey Feedback Manual, PT 5030. 1974. On file in ARI.

- A. Introduce and discuss conceptual issues underlying the survey feedback project
 - 1. Systematic and systemic understanding of unit behavior
 - a. Relationship of goals to unit events and process-measuring goals
 - b. The nature of unit process as a conceptual construct
 - c. Multiple consequences or unintended consequences of unit change
 - d. Closing the conceptual loop - feedback in systemic theory
 - 2. Individual motivation
 - a. Herzberg - satisfiers/dissatisfiers
 - b. Maslow - hierarchy of needs
 - 3. Leadership and management in systems
 - a. Differences between leadership and management
 - b. The cycle of action, feedback, diagnosis, and planning as management activity
 - c. Blake-Mouton managerial grid
 - 4. Organizational development through process consulting
 - a. The nature of process consulting for OD
 - b. Feedback in OD
 - c. Resources for OD
 - 5. Survey Feedback
 - a. Statistical methods necessary for understanding data
 - b. Survey Feedback as a unique form of feedback
 - c. Advantages and disadvantages of Survey Feedback
- B. Provide technical assistance in the understanding and use of survey data from Quarter 1
 - 1. Explanation of the current survey feedback system
 - 2. Using output of current survey feedback
 - 3. Establishing relevance and meaning in survey feedback data
 - 4. Use of project manual
 - 5. Use of project forms and logs
 - 6. Return of actual data
 - 7. Exploration of alternatives for working from current data
 - 8. Application of conceptual materials to task at hand
- C. Motivate commanders to participate actively in the project and its immediate requirements
 - 1. Relevance of current project to unit leadership, ARI, and USAREUR
 - 2. Exploration of issues of defensiveness from
 - a. Negative feedback
 - b. Survey threat
 - c. Interference in unit operations
 - d. Other, to be identified
 - 3. Study of model and opportunity to observe OE process consultation

Figure 3. Goals, Objectives, and Topics for Company Commanders' Initial Training.

Time (approximate)	Goals, Objectives, and Topics (Figure 3)
0900-1045	<p>Introduction of systems analysis as a manner of understanding behavior, and as a basis for evaluating the data collection instruments</p> <p>Goals A 1 a, b, c, d 2 a, b 3 a, c, <u>b</u> 5 <u>b</u>, <u>c</u> B 1, 3 C 1, 3</p>
1100-1200	<p>Technical aspects of the project method, as preparations for understanding the data - statistics, forms, categories, indices</p> <p>A 1 b 3 b 5 a, b, <u>c</u> B 1, 2, 3, 4, 5 C 1, 2, 3</p>
1300-1330	Finish reading case and manual sections
1300	<p>Case discussion of "Captain Sharp," fictitious example in the manual</p> <p>A <u>1</u>, <u>2</u>, <u>3</u>, <u>4</u>, <u>5</u> B <u>1</u>, <u>2</u>, <u>3</u>, <u>4</u>, <u>5</u>, 7, 8 C 1, 2, 3</p>
1400	<p>Give back data (following strength and weakness analysis)</p> <p>A <u>all</u> B 7, 8, <u>4</u>, <u>5</u></p>
1600	<p>Where do we go from here?</p> <p>C 3</p>

Figure 4. Schedule for First Day of Company Commanders' Training.

SCHEDULING OF FEEDBACK MEETINGS

Commanders were encouraged to conduct a sequence of meetings after receiving the survey feedback data each quarter. The meetings would provide a structure for OE.

1. A meeting between the battalion commander and his company commanders to legitimize devoting time to the activity and to place the activity in perspective in terms of past, present, and future uses of the OE cycle.
2. A meeting among all company commanders to share and discuss data for each company.
3. Meetings of each company commander with his key subordinates (executive officer, first sergeant, platoon leaders, platoon sergeants) to discuss company data and progress.
4. Meetings of the commander's key subordinates with their own subordinates to share information and to seek further information, clarification, and ideas.
5. A meeting of all company commanders to share problems identified and action ideas generated within each company.
6. A meeting between battalion commander and company commanders to discuss battalion-wide problems and battalion action plans to deal with these problems.
7. A meeting between each company commander and his key subordinates to determine the final form and content of company action plans.

SURVEY FEEDBACK MATERIALS USED BY COMMANDERS AND TROOPS

The materials described below were used in the application of the pilot project. They were designed to be usable in an operational survey feedback system.

Training manual. The Organizational Survey Feedback Manual is a 103-page manual prepared for use by commanders in the project. It contains five sections: Actions, Feedback, Diagnosis, Planning, and A Fictitious Example. The Actions section discusses: Command actions and organizational development theory; actions-outcomes relationship; command, management, and leadership; human needs and the management of human resources; relationship between human needs, satisfaction, and motivation; "motivator" and "dissatisfier" needs; and feedback data as a human resource management tool. The Feedback section discusses the survey questionnaire, explains how to read the computer printout feedback data, states the basis for comparing data, explains the printout of summary data for the individual unit and the data by question for each unit, and tells how to display the data in a more useful form.

The Diagnosis section discusses purpose, the commander's analysis, diagnosis versus "reality," and sources of diagnostic assistance and meetings. The Planning section states plans and goals, elements of a good plan, and explains the Unit Planning Record. A Fictitious Example demonstrates all of these.

The manual explains how answers to a group of questions can provide an index to a specific area of concern. The indexes, in turn, are grouped into the categories shown below. Input categories are those which the commander has the power to change, while outcome categories indicate the results of change.

Indexes

Input categories:

Motivators	Garrison Training Field training Job responsibility Job attitude Skill development
Dissatisfiers	Unit administration Unit services Racial treatment Drug use response Personal safety
Junior Leadership	Acting Jack (E4 acting as E5) leadership E5-E6 leadership E7-E8 leadership 1st sergeant leadership Jr officer leadership
Unit commander leadership	Commander goal directiveness Commander care factor Commander fairness Commander-EM rapport

Outcome categories:

Unit outcomes	Mission accomplishment Unit morale
General outcomes	General satisfaction Satisfaction with battalion
Outcome trends	(Nine items concerning input category changes)

Survey Questionnaire. The final survey questionnaire administered quarterly to enlisted men was the product of many combined efforts. LTC Ramon Nadal and Major Fred Schaum initiated the pilot project for the Department of the Army; the Cambridge Communications Group, Incorporated, working in Europe with LTC Nadal, developed the original ideas for application of survey feedback in USAREUR in 1973-1974 and most of the items on the original questionnaire,* before initiation of the 1974-1975 work reported here. Nearly all items were constructed using a five-point scale and the survey approach developed at the University of Michigan by the Institute for Social Research (ISR). Questionnaire items are given in Appendix A.

The final survey questionnaire of 76 individual items was designed to provide data on the indexes listed above. Analysis of the responses indicates 6 single-item factors and the 16 multiple-item factors which follow:

- Explicit job satisfaction
- Commander's image as concerned, respectful, and fair
- Perceived standards of performance required by senior NCOs
- Perceived effectiveness of own unit compared to other units
- Perceived quality of unit-supporting services
- Perceived fairness of treatment of minority groups
- Perceived interference of drug usage on men's performance
- Perceived change in unit effectiveness in past several months
- Satisfaction with Army
- Perceived leadership competence of junior NCOs
- Perceived leadership competence of junior officers
- Senior NCOs' consideration
- Perceived effectiveness of field training
- Perceived effectiveness of garrison training
- Perceived autonomy and fairness of work conditions
- Perceived standards of performance required by commander

Feedback Computer Printout. The printout given to company commanders reported responses to individual questionnaire items separately for E1-E4s and E5-E8s (noncommissioned officers or NCOs), within individual units. It also provided summary data and, as comparison points, the previous quarters' averages, the battalion-wide averages, and the averages of scores of like companies (e.g., Infantry line companies) for each index (i.e., cluster of items). Battalion commanders received a printout comparing battalion averages to those of like battalions.

Survey Feedback Summary Data Sheet Display. For each quarter, company commanders were provided with display sheet forms on which to plot their unit's data in accord with instructions in the training manual (e.g. Figure 5). The completed forms would permit more direct observation of trends.

*Cunningham, Scott M. USAREUR Field Level Attitude-Motivation Measurement System. Cambridge Communications Group, Report No. 06-1, Contract DAHC 15-73-C-0067, March 1974.

SURVEY FEEDBACK SUMMARY DATA SHEET DISPLAY

Unit Designation:		Data:	
Unit ID#	Unit Categories	MOTIVATORS	DISSATISFIERS
INDICES:		Garlson Training	Unit Admin.
		Field Training	Unit Services
		Job Responsibility	Racial Treatment
		Job Attitude	Drug Use Response
		Skill Development	Personal Safety
INDEX VALUES			
5.0			
4.5			
4.0			
3.5			
3.0			
2.5			
2.0			
1.5			
1.0			

This data is for the exclusive use of ARI and the CO of the unit designated above. Showing the data to higher or lower echelons may be done only at the discretion of ARI, or the unit CO.

Figure 5. Survey Feedback Summary Data Sheet Display Example.

Unit Planning Records. Commanders were requested to complete Unit Planning Record sheets quarterly to document their plans for action (Figure 6), and to return the completed forms to the ARI Field Unit in USAREUR.

RESEARCH DESIGN FOR EVALUATION

The pilot project had been planned to include a separate set of activities designed to evaluate the usefulness of survey feedback to the Army.

SUBJECTS

Five Infantry, five Armor, and five Field Artillery battalions - each having five companies or batteries - participated in the project. The Deputy Commander in Chief, USAREUR personally selected the 15 battalions because he felt that their commanders would be receptive to research being conducted on survey feedback. Enlisted men in all the companies completed survey questionnaires. To provide a control condition, commanders in three battalions (one Infantry, one Armor, one Field Artillery) did not receive feedback of survey data until after the project had been completed. The remaining 12 battalion and 60 company commanders received feedback quarterly.

FEEDBACK VARIATIONS

Three variations of method were used for training commanders and helping them to apply survey feedback data. Initial training, at the time of Quarter 1 feedback, was fundamentally the same for each of the variations; major differences in treatment were at Quarters 2, 3, and 4.

Civilian Coach. In 15 companies (3 battalions), company commanders examined feedback printouts for Quarters 2 and 3, and then met as a group with their coach, their original civilian trainer. (In one battalion, a field grade officer with an M.A. degree in human relations served as co-trainer/coach.) The coach responded to the commanders' needs for assistance in using the system, sometimes meeting with an individual commander to help with his particular situation.

In general, coaches continued to encourage commanders to work together on their data, to involve their battalion commanders in the OE cycle, and to share data with subordinate leaders. More specifically, coaches facilitated communication and problem-solving behavior among commanders, and offered advice on how to implement the OE cycle. On the average, half a day to a full day of coaching was provided.

I. MEETING RECORD

ARI RPR 77-2

Date	# of Mns.	Individuals Present	List of Issues Discussed
1 Aug 74 (First meeting)	3 1/2	CO	Time spent analyzing data. Problem areas appear to exist in the following areas: CO Leadership, Junior Leadership, Unit Services, Unit Morale. No action will be taken pending the outcome of the next printout.
2 Aug 74 (Second meeting)	2	CO and Enlisted Advisory Council (8 EM E1-E4)	Discussed what Project Survey Feedback was with the soldiers. Discussed the problems listed above. EM were receptive to discussion and felt majority of unit problems hinged around the CO Leadership problem.
2 Aug 74 (Third meeting)	2	CO, 3 PSGs, 1 E6, 1 E5, XO	Discussed what project was all about. Discussed CO's analysis of the data. Problem of Acting Jacks stems from a greater problem, that of no firm promotion policy. CO discussed what the policy should be and will write one. Additionally a man selected to be an Acting Jack will go before a unit board and then be informally schooled in duties of junior NCO by PSG and ISG prior to becoming an Acting Jack. The Supply Room problem was recognized as totally not the Supply SGT's fault. However, he is a hard man to get along with. It was recommended that SP4 be put in Supply Room to assist Supply SGT thus making Supply Room more responsive. In the area of Promises Kept--most promises not kept stemmed from previous commander. CO pointed out he would wait until next printout to get a good feel for how troops and NCOs now viewed CO Leadership.

II. ACTION PLAN RECORD

Input Indices (Problem Areas. For Column A, use only those numbers which apply to your unit.)

- | | | | |
|-----------------------|----------------------|-------------------------------|--------------------------|
| 1. Garrison Trg. | 6. Unit Admin. | 11. Act. Jack Leadership | 16. CO Goal Directedness |
| 2. Field Trg. | 7. Unit Services | 12. E 5-6 Leadership | 17. CO Care Factor |
| 3. Job Responsibility | 8. Racial Treatment | 13. E 7-8 Leadership | 18. CO Fairness |
| 4. Job Attitude | 9. Drug Use Response | 14. ISG Leadership | 19. CO-EM Rapport |
| 5. Skill Development | 10. Personal Safety | 15. Junior Officer Leadership | |

A	B	C	D
I N D E X	State the specific problem(s) you have now determined applies to your unit for this index and why this is so.	List the action or actions to be taken to solve the problem. State <u>what</u> is to be done by <u>whom</u> and by <u>what time</u> .	List the observable improvements you expect by the time of the next feedback.
11	Acting Jack Leadership because Acting Jacks are now just appointed. They don't really know what is expected of them.	Present Acting Jacks will be instructed by PSGs. New ones will be selected by a unit board and then instructed by PSGs prior to becoming Acting Jacks.	Upward trend in feedback data.
7	Supply Room not responsive	Will place an assistant in Supply Room.	More responsive Supply Room; upward trend in data.
16, 17,18, 19	Based on how NCOs and E1-E4 talk about previous CO.	None. Wait for next printout to get an idea how troops are reacting to me.	All areas should come up if I'm doing my job.

Figure 1. Example of a Unit Planning Record.

Military Monitor. In the Military Monitor variation used in 15 companies, a field grade officer from USAREUR Headquarters visited the battalion site following mail-back of survey results. He spent up to a day meeting with company commanders as a group, and individually and talking with the battalion commander. He emphasized the importance of following the prescribed sequence of meetings, and he helped commanders understand how to use the survey feedback system without offering direct assistance in diagnosis and action planning related to company problems. His role thus differed from that of the civilian coach, who provided assistance in any way that appeared desirable. The role of the military monitor was intended to support full use of the survey feedback system without providing direct assistance with company problems.

Structured Sequence. In the Structured Sequence feedback variation used in 30 companies, a half day of training by the original trainer was provided as a continuation of initial training at the time Quarter 2 feedback was received. In the process of interacting about Quarter 2 survey results in the group training session, the trainers focused on accomplishment of the goals most needing reinforcement in those particular commanders.

Throughout the project, trainers and military monitors were responsible for briefing and training replacement commanders in Civilian Coach and Military Monitor conditions. They were also responsible for training replacement commanders at Quarter 2 in the Structured Sequence condition. Thereafter, company commanders in the Structured Sequence condition were charged with the responsibility of briefing and training replacement commanders.

FEEDBACK GROUPS

After all data collection for the project had been completed, the 60 companies receiving feedback were divided into two groups of 30 companies each to evaluate differentially the effects of survey feedback in companies where commanders received full training and remained in command long enough to apply it - Feedback Group I - and the effects in companies with command turnover or relative lack of command commitment to survey feedback - Feedback Group II.

For purposes of statistical analysis, it was desirable that Feedback Groups I and II be balanced exactly with respect to branch (Armor, Field Artillery, Infantry) and company type (line, combat service support, and headquarters). Each condition therefore was represented by six each line companies, two each combat service support companies, and two each HQ companies from Armor battalions; Field Artillery battalions; and Infantry battalions.

The following procedure was used to create Feedback Group I: First, all companies that had the same commander at initial training and at Quarter 3 survey questionnaire administration were identified and tentatively assigned to Group I. Second, where there was a surplus (e.g., three Armor HQ companies when only two were needed), commanders' "commitment to project" ratings were examined and the more committed commanders were retained in Group I. Third, where a surplus continued to exist because of ties in commitment ratings, feedback variations (Civilian Coach, Military Monitor, Structured Sequence) and battalion affiliations were examined and companies assigned in a manner to make for a balanced distribution between Feedback Groups I and II. Each group included 15 companies from Structured Sequence. Group I included 6 companies from the Civilian Coach procedure and 9 from Military Monitor; Group II included 9 from Civilian Coach and 6 from Military Monitor. For 10 battalions, either 2 or 3 companies were included in Group I; for 2 battalions, 4 companies were included in Feedback Group I and only 1 in Group II.

To summarize, Feedback Groups I and II were exactly equated for branch and company type, were approximately equal with respect to feedback variations and battalion affiliations, and differed primarily with regard to command tenure:

<u>Command Tenure</u>	<u>Percent of commanders receiving initial training</u>	
	<u>Feedback Group I</u>	<u>Feedback Group II</u>
Remaining at Quarter 2	100	77
Remaining at Quarter 3	97	43
Remaining at Quarter 4	87	20

The groups also differed somewhat with regard to commitment to survey feedback as measured by ratings on a 5-point scale (5 = high). For Quarter 1, the mean for Group I was 3.78, for Group II, 3.26 ($t = 1.94$, $df = 49$, not significant); for Quarter 3, the mean for Group I was 3.38, for Group II, 2.61 ($t = 2.29$, $df = 42$, $p < .05$); and for Quarter 4, the mean for Group I was 2.79, for Group II, 2.75 ($t = .10$, $df = 37$, not significant).

The No Feedback Group consisted of one battalion each from Armor, Field Artillery, and Infantry, each battalion containing 3 line companies, 1 combat service support company, and 1 HQ company.

SOURCES OF RESEARCH DATA

Four general types of evaluative information were obtained: (1) Unit indicators; (2) enlisted responses to the quarterly survey questionnaire; (3) responses to evaluative questionnaires; and (4) interviews.

Although not reported directly here, information obtained by observations of unit personnel and casual conversations with them by briefers, trainers, coaches, monitors, and collectors of quarterly data was valuable to the researchers in understanding implementation of the survey feedback system and its effects. Such information gave direction to the interviews conducted at the end of the project and to the enlisted evaluative questionnaire.

Unit Indicators. Researchers collected unit indicator data quarterly from each company on the day that they administered the survey questionnaire. Figure 7 shows the information obtained on performance, morale, recognition of outstanding individual performances, state of discipline, and educational pursuits.

The unit indicator data were collected because they were relevant to unit functioning and were readily available rather than because they were considered to be an adequate set of criteria for measuring possible effects of survey feedback.

Survey Questionnaire. Items on the survey questionnaire completed quarterly by enlisted men provided a major set of dependent variables for evaluating the effects of survey feedback. Of the 76 items eliciting troop opinions and attitudes, 74 were usable, with increases in scale values representing improvement. The remaining two items refer to drug usage (Items 25 and 28, Appendix A) and were not used because responses were ambiguous outside specific unit context.

Evaluative Questionnaire. Four different evaluative questionnaires were completed, one by the enlisted men who had answered the survey questionnaire and three by commanders (Figure 8). Immediately after completing the survey questionnaire at Quarter 4, enlisted men completed an additional questionnaire containing items about their experience and opinions concerning survey feedback. Questions are reproduced in Tables 2, 6, 7, 14, 15, 18, 19, and 22.

Company commanders completed mail-back evaluative questionnaires several weeks after receiving feedback at Quarters 1, 3, and 4. These questions are reproduced in Tables 1, 4, 5, 12, 13, 20, and 21.

Battalion commanders completed a mail-back evaluative questionnaire at Quarter 4, patterned after those completed by company commanders. Questions are reproduced in Tables 1, 3, and 21.

At the conclusion of the project, company commanders rated the value to them of feedback on each individual item of the quarterly survey questionnaire completed by troops. Responses are shown in Table 23. Company commanders also rated the value to themselves of each type of entry (e.g., breakout of E1-E4s and E5-E8s, comparison with like companies) on the feedback computer printout.

Performance

1. Ratio of complaints to Inspector General
2. Number of deadlined (inoperable) vehicles

Morale

3. Number of re-enlistments

Recognition of Outstanding Performances By Individuals

4. Ratio of personnel receiving or recommended for Army Commendation Medal
5. Ratio of personnel receiving or recommended for Division Certificates of Achievement
6. Ratio of personnel receiving or recommended for Brigade Certificates of Achievement
7. Ratio of personnel receiving or recommended for Battalion Certificates of Achievement
8. Ratio of personnel receiving or recommended for letters of commendation

State of Discipline

9. Ratio of man-days AWOL
10. Ratio of company level Article 15s
11. Ratio of battalion level Article 15s
12. Ratio of Court Martials
13. Ratio of MP reports
14. Ratio of MP reports concerning drug abuse
15. Ratio of MP reports concerning alcohol abuse
16. Ratio of MP reports involving racial incidents
17. Ratio of serious incident reports
18. Ratio of personnel enrolled in drug and alcohol rehabilitation program
19. Ratio of administrative discharges

Educational Pursuits

20. Ratio of personnel enrolled in high school completion courses
21. Ratio of personnel in local university courses
22. Ratio of personnel enrolled in correspondence university courses

Note. Except for variables 2 and 3, ratios were calculated using the quarterly sum as the numerator, and average assigned strength as the denominator.

Figure 7. Unit Indicators.

SOURCE OF RESEARCH DATA	RESPONDENTS	TIMING
Survey questionnaire	All enlisted men	Quarters 1, 2, 3, 4
Evaluative questionnaires:		
(1) Enlisted evaluation	All enlisted men	Quarter 4
(2) Quarterly post-feedback	Company commanders in feedback condition	After feedback, Quarters 1, 3, 4
(3) Battalion commanders; resembled items in (2)	Battalion commanders in feedback condition	After Quarter 4 feedback
(4) Individual item evaluation	Company commanders in feedback condition	After Quarter 4 feedback
Interviews	Battalion and company commanders, and company subordinates; in feedback condition	Post-project, after Quarter 4 feedback

Figure 8. Survey Questionnaire, Evaluative Questionnaires, and Interview.

Interviews. In June 1975, at least four weeks after Quarter 4 feedback, individual interviews were conducted with key personnel in feedback battalions who had participated in the project and were present on the day the interview team visited the battalion: 10 battalion commanders, 43 company commanders, 25 company executive officers, and 27 first sergeants. Wherever a company commander was unavailable for interview, his executive officer and/or first sergeant was interviewed. Additional executive officers and first sergeants were interviewed as schedules permitted. Appendix B summarizes interviews with battalion commanders.

At each battalion site, two or three interviewers met with company commanders in a group for an hour and a half to discuss organizational environment in USAREUR. These sessions enabled interviewers to learn more about the specific environment in which survey feedback was implemented and enabled company commanders to comment freely about the environment, thereby freeing them to focus dispassionately on survey feedback during individual interviews.

To begin each individual interview, the interviewer asked the interviewee to describe his entire experience with survey feedback, referring as necessary to Unit Planning Records and evaluative questionnaires completed during the project. Interviewers had checklists and specific questions for all interviewees. Responses were carefully recorded and provided data for later analysis. Interviewers primarily responded to what interviewees brought up about survey feedback, attempting to facilitate a descriptive/evaluative thought process about survey feedback. This collaborative evaluation strategy was adopted because researchers recognized that interviewees were in a unique position to evaluate survey feedback and had had highly varying degrees and qualities of experience with it. It was deemed relatively more important to facilitate thoughtful consideration of features of survey feedback that had been meaningfully experienced than to duplicate the comprehensive sampling accomplished by the evaluative questionnaire.

TYPES OF STATISTICAL ANALYSIS

A three-way analysis of variance was performed on each unit indicator (see Figure 7), with repeated measures on one factor. Independent variables or factors were Feedback Groups, Branch, and Quarters (repeated measure).

For each of 74 usable questionnaire items, two analyses of variance were performed. For the study of feedback groups, a four-way analysis of variance with all factors crossed was used. The factors were Feedback Groups, Branch, Company Type, and Quarters. For the study of feedback variations, a four-way analysis of variance was used, with battalions nested within variations and other factors crossed. Factors here were Feedback Variations, Branch, Company Type, and Quarters. Because of the relatively large number of analyses of variance performed on items, the level of significance for F ratios was set at .01. Means for individual items achieving significance for the feedback by quarter interaction tables are presented in Appendix C.

In addition to testing individual items for significance of changes over quarters, trends were examined in the responses to the 74 items viewed as a whole. This was done by calculating the mean for each subject across all 74 items and then entering these means into analyses of variance similar to those described above.

RESEARCH OUTCOMES

Outcomes of the research project can be summarized in terms of measures of unit improvement, opinions and perceptions of unit personnel, actions taken as a result of survey feedback, and implementation of the OE cycle and group meetings. These outcomes must be considered in the context of the organizational environment existing in USAREUR at the time of the project.

OPINIONS AND PERCEPTIONS

Commanders and researchers alike recognized during the project that the survey feedback system conflicted with certain powerful features of the existing organizational environment. The survey data emphasized troop perceptions of unit capabilities, unit needs, and unit problems. The feedback and problem-solving procedures in the survey feedback system required that management priorities relate to concerns and perceptions of the troops, whereas in fact unit management priorities in the existing organizational environment related far more to external demands. For example: procedure required managing units "piecemeal" because regulations and requirements prevented unit integrity; meeting many specific requirements; and attempting to achieve adequate unit performance in areas being inspected or otherwise tested by higher levels of command.

Commanders viewed unit priorities related to survey results as highly relevant to the overall effective functioning of their units, but much less relevant to day-to-day demands.

One battalion commander stated "In this environment we live in, only the fittest survive. We are going fast and furious and have too many immediate pressures." (A survey of more than 250 company commanders in USAREUR reported that they worked an average of more than 62 hours a week and succeeded in meeting half or less than half the requirements to their satisfaction.*)

* Stewart, S. R., Christie, C. I., and Jacobs, T. O. Leadership tasks performed by U.S. Army company commanders in Europe. ARI Research Problem Review 76-16, November 1976.

The lead interviewer summarized his impressions thus, after interviews with company commanders at the end of the project:

Much of the survey information confirmed commanders' perceptions of their units. Many times it brought to commanders' attention problems of which they were painfully aware. In these areas and in the areas in which the data provided new information, commanders felt that in the present organizational environment, effective action could not be taken. Lack of time, due to overcommitment of units and a desire for immediate perfection, worked against a problem analysis and planning process that would produce effective changes in these areas and other areas within their commands. Commanders felt that a command emphasis allowing time to study and plan was necessary to gain maximal benefits from survey feedback. However, battalions were reluctant to allocate their most scarce resource, time, to the feedback process. Many commanders stated that survey feedback had received a very low priority in their battalions.

Researchers and many commanders judged that company commanders were looking to their superiors and not to their units as a source of priorities for addressing problems, planning actions, and monitoring solutions. Most considered that the most successful commander was the one who could effectively "G-2" the perceptions and thinking of officers at higher levels of command, and effectively organize and manage his resources to meet his superiors' standards.

Opinions About Introducing an Operational Survey Feedback System

Battalion and Company Commanders. During interviews at the end of the project and on evaluative questionnaires at post-Quarters 3 and 4 feedback, commanders expressed their opinions and recommendations about the Army's adopting an operational survey feedback system. Assuming that company and battalion commanders controlled questionnaire administration and that results would be confidential, a clear majority of commanders (70% to 85%) desired to continue survey feedback for themselves and for their immediate successors (Table 1).

Table 1. Questionnaire Responses of Company and Battalion Commanders:
Desire to Continue Survey Feedback Operationally

Question: After completion of the research project, would you want to continue quarterly surveys in your company (battalion) in order to receive computer printouts by mail?

Question: Would you want to establish quarterly surveys in your company (battalion) as an operating policy which would continue unless changed by yourself or one of our successors?

	% of Responses	
	Yes, Continue	No, Don't Continue
Company Commanders:		
Post-Quarter 3 Feedback		
Personal desire (n = 44)	73	27
Operating policy (n = 43)	72	28
Post-Quarter 4 Feedback		
Personal desire (n = 40)	85	15
Operating policy (n = 39)	82	18
Battalion Commanders:		
Post-Quarter 4 Feedback		
Personal desire (n = 10)	70	30
Operating policy (n = 10)	70	30

Note. When responses of battalion and company commanders are pooled, results are significant at $p < .01$ for each question.

The question was rephrased during the interviews:

The Army might decide to go operational with some sort of survey feedback system. If you were in the room where that question was being decided, and were asked for your opinion based on your own personal experience with survey feedback and on all that you know about survey feedback, what would you say?

Of 43 company commanders, 77% said they would favor an operational survey feedback system. Their subordinates agreed; 80% of the 25 company executive officers favored an operational survey feedback system, as did 80% of the 27 first sergeants interviewed.

Two types of comments and qualifications to these recommendations were made. First, some interviewees explicitly recognized that they were uninformed about dollar and data-processing costs of survey feedback. Thus, while they could state positively that survey feedback was of positive value in their units, they could not assess its cost-effectiveness.

Second, doubts were expressed about the Army's ability to institutionalize an effective survey feedback system in the existing organizational environment in USAREUR. Most of those who favored an operational system were asked further how they thought an operational system should work; 63% of the 30 company commanders, 70% of the 20 company executive officers, and 55% of the 22 first sergeants said that aggregate results of survey questionnaires should not be provided to Brigade Headquarters or higher. Many military personnel felt that an operational survey feedback system that provided summarized results to higher headquarters would remain neither confidential nor non-punitive for long.

Enlisted Men. Immediately after administration of the Quarter 4 survey questionnaire, the assembled enlisted men were asked to fill out a short evaluative questionnaire. Almost half said they believed that the "System" might have an adverse effect on such projects as the organizational survey they had just participated in (Table 2).

Specific Values of Survey Feedback

Usefulness to battalion and company commanders. Of 10 battalion commanders interviewed at the end of the project, two had made extensive use of survey data; they and two other commanders gave survey feedback an enthusiastic endorsement. Three battalion commanders were judged to be moderately positive about survey feedback, one to have reservations, and two to be negative. (A summary of the interviews is given in Appendix B.) Prior to the interviews, battalion commanders completed a mail-back questionnaire. Responses on usefulness of survey feedback are shown in Table 3.

Table 2. Questionnaire Responses of Enlisted Men:
Influence of the "System" on Survey Feedback

Question: Do you believe that things like this organizational survey project could be very good but are not as good as they should be because of the "System"?

	% of Responses ^a		
	Yes	Undecided	No
EM in Feedback:			
E1-E4 (n ~ 2,350)	47	32	16
E5-E8 (n ~ 1,140)	47	34	16
EM in No-Feedback Conditon:			
E1-E4 (n ~ 570)	49	31	15
E5-E8 (n ~ 235)	47	33	18

Note. Ns are approximate.

^aPercentages do not add up to 100% because some individuals marked the answer sheets erroneously.

Table 3. Questionnaire Responses of Battalion Commanders:
Usefulness of Survey Feedback

Question: To what extent have the Survey Feedback data been useful to you in your role as commander?

Question: To what extent have the Survey Feedback data helped you learn new things about your unit?

Question: Assuming another survey were administered, how valuable would you expect the next quarter's Survey Feedback to be?

Item	% of Responses				
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Data Useful (n = 10)	20	10	50	20	0
Learned New Things (n = 10)	20	10	50	10	10
Next Quarter's Data (n = 10)	20	10	40	30	0

Responses of company commanders to similar questions are shown in Table 4. Company commanders were asked about the usefulness of survey data in somewhat different wording in the post-Quarter 4 item-specific questionnaire:

To what extent have you actually found the data feedback to be useful and important to you for understanding and managing your unit? (rated on a 5-point scale from 1, "to a very little extent" to 5, "to a very great extent")

Results were comparable to those presented in Table 4 (mean = 2.84, standard deviation = 1.00, n = 32).

Table 4. Questionnaire Responses of Company Commanders:
Usefulness of Survey Feedback

Question: To what extent have the Survey Feedback data been useful to you in your role as a commander?

Question: To what extent did the Survey Feedback help you learn new things about your unit?

Question: How valuable do (would) you expect the next quarter's Survey Feedback results to be?

Item and Response Occasion	% of Responses				
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Data Useful					
Quarter 3 (n = 44)	7	20	43	25	5
Quarter 4 (n = 39)	8	20	49	13	10
Learned New Things					
Quarter 1 (n = 49)	6	10	47	27	10
Quarter 3 (n = 44)	14	23	36	18	9
Quarter 4 (n = 39)	8	20	49	18	5
Next Quarter's Data					
Quarter 1 (n = 49)	0	8	35	31	26
Quarter 3 (n = 44)	14	7	43	27	9
Quarter 4 (n = 39)	10	10	44	21	15

Company commanders described several other perceived values of survey feedback at the end of the project. Many of the replacement commanders stated that they used the data to orient themselves to their commands. Five commanders felt that survey feedback was valuable because it represented an infusion of "civilian" ideas into the Army. Commanders in four battalions believed that the opportunity to meet and work together on common problems was a valuable outcome of survey feedback.

Most battalion and company commanders who were positively disposed toward survey feedback indicated that some features of the organizational environment, such as overemphasis on short-term goals, overcommitment, and lack of time, prevented a realization of greater value from the survey feedback process. The commanders indicated that such features worked against a problem analysis and planning process that could produce effective changes in problem areas identified or confirmed by the survey. For example, one battalion commander considered survey feedback to be a valuable tool. He organized meetings at which battalion data were discussed. At the meetings, company commanders identified weak and strong areas in their own commands, discovered similarities in their problems, and attempted to identify corrective action. The battalion commander believed that this diagnostic process predisposed commanders to talk with NCOs more frequently about problems and thereby increased the NCOs' sense of being included in the functioning of the command. However, the operational requirements and troop commitments were so heavy in the battalion that there was no opportunity to implement any of their planned actions. The commander stated, "We did not make full use of it (survey feedback). In retrospect, it possibly should have been the first priority."

Many company commanders who favored survey feedback said they felt that in many areas real improvements did not take place because superior officers dictated approaches and solutions to problems with which they were unfamiliar, or because superiors failed to confront certain problems and to identify their real causes.

Learning Experience For Company Commanders. Most company commanders responded that survey feedback was valuable as a learning experience at least to some extent (Table 5). This response may have included the training, feedback of data itself, interactions with others, and the consequences of trying to implement the survey feedback in the existing environment.

Usefulness to Company Executive Officers and First Sergeants. Many of the executive officers and first sergeants interviewed at the end of the project saw increased communication as a major impact of survey feedback. For example, three executive officers stated that the data had given them increased awareness of the impact of their behavior on others. Five others linked changes in their leadership styles to the survey data: Two of these had become more involved in understanding troop perceptions and problems; one had decided to become more visible to troops; and two had consulted senior-level NCOs about their own leadership styles.

**Table 5. Questionnaire Responses of Company Commanders:
Survey Feedback as a Learning Experience**

Question: In general, how valuable a learning experience has the Survey Feedback project been to you, to date?

Response Occasion	% of Responses				
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Quarter 1 (n = 49)	2	22	37	25	14
Quarter 3 (n = 44)	9	20	41	23	7
Quarter 4 (n = 39)	10	13	46	21	10

Three first sergeants stated that the survey data had given them better insight into troop problems. Three others reported that they and their commander had worked as a team and that the data had affected many of their plans and actions. Four first sergeants reported talking to other NCOs about their responsibilities and leadership style. One had set up a promotion board. Only one reported that he became more troop-oriented as a result of survey feedback, while another reported resisting the company commander's requests to change in that direction. Ten first sergeants said the survey did not provide them with new information and did not lead to changes in their own behavior.

Usefulness to enlisted men. In the evaluative questionnaire that enlisted men were asked to fill out after they completed the Quarter 4 survey questionnaire, the enlisted men were asked about the effects of administering the survey and providing summarized results to their commander over the previous nine months. Two-thirds of them reported there had been "not much effect" (Table 6). About half the NCOs and a third of the E1-E4s felt that survey feedback could be "helpful" or "very helpful" in theory (Table 7).

Table 6. Questionnaire Responses of Enlisted Men:
Perceived General Value of Survey Feedback

Question: In practice, over the past year, what has been the effect of administering this survey and providing summarized results to your Unit Commander?

	% of Responses				
	Very Harmful	Harmful	Not Much Effect	Helpful	Very Helpful
Feedback Conditions:					
E1-E4 (n = 2,350)	12	9	62	14	4
E5-E8 (n = 1,140)	6	5	66	19	4

Note. Ns are approximate.

Table 7. Questionnaire Responses of Enlisted Men:
Potential Effects of Survey Feedback

Question: In theory, what effect do you think could come out of administering this survey and providing summarized results to the unit commander?

	% of Responses				
	Could be Very Harmful	Could be Harmful	Not Much Effect	Could be Helpful	Could be Very Helpful
Feedback Conditions:					
E1-E4 (n = 2,350)	9	12	41	29	10
E5-E8 (n = 1,140)	5	6	36	37	16
No-Feedback Condition:					
E1-E4 (n = 570)	7	11	42	27	13
E5-E8 (n = 235)	5	12	30	33	20

Note. Ns are approximate.

MEASURES OF UNIT IMPROVEMENT

Results of Statistical Analysis of Unit Indicators

None of the F ratios for unit indicators were significant at the .05 level for Feedback Variation by Quarter interactions or for Feedback Groups by Quarter interactions. Mean scores for the variables did not suggest any patterns or trends associated with feedback over quarters. To show typical results, Appendix D gives the means and F ratios for unit indicators for the Feedback Groups analyses.

Results of Statistical Analysis of Survey Questionnaire Items

Mean responses. Each individual's responses to the 74 items on the survey questionnaire for a given quarter can be represented by a single index number, the mean of his responses on a 5-point scale where 5 = most favorable and 1 = unfavorable. From this index, the mean response of any group can be calculated for a given quarter. Figure 9 summarizes the changes over quarters in the responses of enlisted men in feedback conditions versus those in the no-feedback control condition. The treatment by quarter interaction is statistically significant at the .05 level ($F = 3.69$, $df = 3,200$). At Quarter 1, before any feedback had been received, responses were virtually identical. At Quarters 2, 3, and 4 enlisted men in feedback conditions responded more favorably than men in the no-feedback condition.

Table 8 presents the mean responses separately for E1-E4s and E5-E8s in both feedback and no-feedback conditions, by quarter. For both levels of enlisted men, treatment by quarter interactions are statistically significant at the .01 level. Although the pattern of responses after Quarter 1 differs between E1-E4s and E5-E8s, men in feedback conditions generally responded more favorably than men in the no-feedback condition.

Mean questionnaire responses for the two levels of enlisted personnel by quarter are differentiated by Feedback Variation in Table 9 and by Feedback Group in Table 10. None of the interactions are statistically significant. Therefore, the observed differences between feedback and no-feedback conditions are unlikely to be attributable to the effects of either Feedback Variations or Feedback Groups.

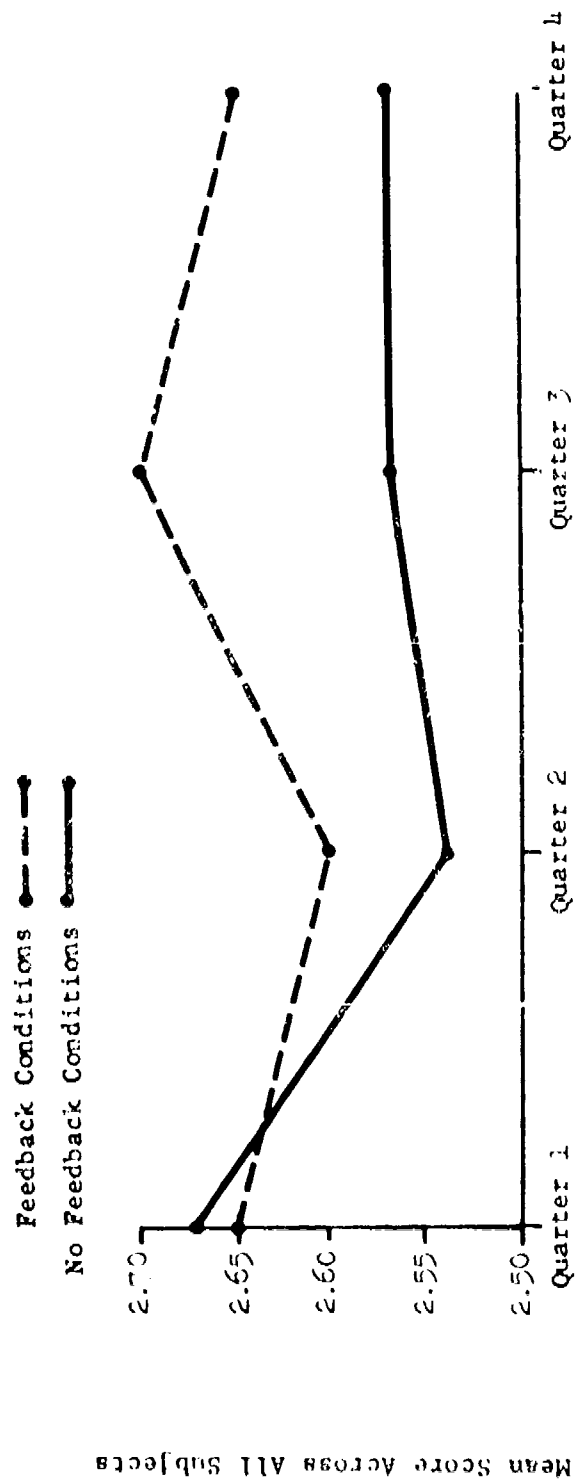


Figure 9. Mean Scores by Quarter for Enlisted Men in Feedback and No-Feedback Conditions.

Table 8. Mean Scores in Feedback and No-Feedback Conditions for E1-E4s and E5s-E8s, By Quarter

Group	Mean Responses by Quarter (5-point Scale Where 5 = High, 1 = Low)			
	Q1	Q2	Q3	Q4
E1-E4:				
Feedback Conditions (n = 8234)	2.50	2.45	2.56	2.53
No-Feedback Condition (n = 2046)	2.55	2.45	2.46	2.40
E5-E8:				
Feedback Conditions (n = 3530)	3.02	2.94	3.03	2.89
No-Feedback Condition (n = 857)	3.00	2.80	2.80	2.96

Note. All interactions significant at $p < .01$.

Table 9. Mean Scores for E1-E4s and E5-E8s by Feedback Variation, By Quarter

Feedback Variation	Mean Responses by Quarter (5-point Scale Where 5 = High, 1 = Low)			
	Q1	Q2	Q3	Q4
E1-E4:				
Civilian Coach	2.52	2.51	2.65	2.54
Military Monitor	2.48	2.50	2.50	2.58
Structured Sequence	2.49	2.40	2.55	2.50
E5-E8:				
Civilian Coach	3.04	3.08	3.05	2.88
Military Monitor	2.92	2.93	3.02	2.93
Structured Sequence	3.01	2.89	3.30	2.88

Table 10. Mean Scores for E1-E4s and E5-E8s in Feedback Groups I and II, By Quarter

Feedback Groups	Mean Responses by Quarter (5-point Scale Where 5 = High, 1 = Low)			
	Q1	Q2	Q3	Q4
E1-E4:				
Feedback Group I	2.51	2.45	2.53	2.53
Feedback Group II	2.49	2.45	2.60	2.53
E5-E8:				
Feedback Group I	3.02	2.90	3.04	2.92
Feedback Group II	2.98	3.00	3.02	2.86

Responses to individual questionnaire items were analyzed statistically (Appendix C). The patterns of responses to individual items essentially reflect the summary indexes shown in Figure 9 and Tables 8, 9, and 10. As an illustration, Table 11 shows three questionnaire items with E1-E4 responses significant at the .01 level. The results are consistent with the goals of survey feedback: Compared to E1-E4s in the no-feedback condition, E1-E4s in feedback conditions in Quarters 2, 3, and 4 reported less harassment, more pride in being a member of their battalions, and more satisfaction with life in the Army.

Interpretation. Overall interpretation of the results must take into account a number of considerations. As Figure 9 shows, the favorability of responses from both feedback and no-feedback conditions decreased at Quarter 2. The two plausible explanations do not detract from an overall interpretation that survey feedback was effective, as measured by responses to the survey questionnaire. First, responses tend to be less favorable immediately after an OE intervention,* and the likelihood of such an outcome is one reason why most OE intervention research includes a measure of responses at least six months after an intervention is introduced. Second, because only half as many enlisted men completed the survey questionnaire at Quarter 2 as at the other quarters (Table 17), the Quarter 2 responses may not be entirely comparable.

* Cohen, S. L., and Turney, J. R. Results of an Organizational Diagnostic Survey of an Army Field Facility Work Environment. ARI Technical Paper 272. January 1976.

Table 11. Mean Responses to Survey Questionnaire By Feedback Variation

Question 62: To what extent are you free from harassment in your unit?

Question 60: To what extent are you proud to be a member of your battalion?

Question 59: Taking all things together, how satisfied are you with your life in the Army?

Items and Feedback Variation	Mean Responses, by Quarter (5-Point Scale Where 5 = High, 1 = Low)			
	Q1	Q2	Q3	Q4
Amount of Harassment				
E1-E4:				
Civilian Coach	2.15	2.40	2.37	2.17
Military Monitor	2.04	2.20	2.16	2.25
Structured Sequence	2.07	2.03	2.26	2.19
No Feedback	2.25	2.22	2.29	2.12
Pride in Battalion				
Membership				
E1-E4:				
Civilian Coach	2.29	2.26	2.46	2.26
Military Monitor	2.08	2.13	2.20	2.37
Structured Sequence	2.24	2.17	2.37	2.36
No Feedback	2.44	2.27	2.29	2.15
Satisfaction with				
Army Life				
E1-E4:				
Civilian Coach	1.98	1.86	2.18	2.13
Military Monitor	1.81	1.95	2.14	2.18
Structured Sequence	1.95	1.84	2.17	2.23
No Feedback	1.98	1.94	2.05	1.98

Note. None of the entries within the matrix for each question differ significantly from each other at the .05 level by Newman-Keuls test.

For feedback conditions, responses to the survey questionnaire were most favorable at Quarter 3. This is consistent with the training and encouragement provided to company commanders, which emphasized the period between Quarters 2 and 3 as the time to follow through in the use of survey feedback.

Responses of enlisted men in the no-feedback condition were less favorable at Quarters 2, 3, and 4 than at Quarter 1. It is plausible that the men resented completing the questionnaire when their commanders would not be provided with the results, although three facts argue against this interpretation. First, the men knew at Quarter 1 whether their commanders would receive feedback, but responses at Quarter 1 were virtually identical for all conditions. Second, responses by E1-E4s and E5-E8s in the no-feedback condition differed markedly at Quarter 4 (Table 8), suggesting the influence of some other factor. Third, enlisted men in both feedback and no-feedback conditions did not differ in their reports of how honestly they had completed the survey questionnaire (Table 22, $\chi^2 = 5.48$, nonsignificant for E1-E4s; $\chi^2 = 7.77$, nonsignificant for E5-E8s).

Overall, survey feedback resulted in small but reliable improvements in the perceptions of enlisted men concerning unit functioning, as measured by survey questionnaire responses.

DIAGNOSES AND ACTIONS BASED ON SURVEY FEEDBACK

Diagnoses Based on Survey Feedback. In the interviews conducted at the conclusion of the project, 30 of the 43 company commanders reported that survey feedback had affected their command actions, and 13 - some of whom had just assumed command - reported that it had not. Twelve commanders emphasized that survey feedback provided them with a comprehensive picture of their units which in some areas validated their suppositions and in others jarred their perceptions. In general, they reported that the survey data helped them focus on problem areas and in some cases helped them react to problems more rapidly and maintain their effectiveness as leaders.

Twenty-two commanders indicated that the data had given them information on previously unknown problems or increased their awareness of the extent of known problems in the following fields: training, E1-E4s' job attitudes, NCOs' job attitude, E1-E4s' skill development, unit administration, unit services, racial treatment, attitudes toward drug use, NCOs' leadership, junior officers' leadership, and company commanders' fairness, care and concern for troops, and degree of goal directedness.

Most commonly, commanders learned more about attitudes and behavior of NCOs than about any other aspect of their commands. Seven commanders learned that acting sergeants' leadership was viewed far more negatively than they had realized. Six commanders discovered that, contrary to their expectations, NCOs were more negative about the unit, their jobs, or NCO leadership ability than were E1-E4s. In some cases, subsequent discussions with subordinates revealed the NCOs were dissatisfied with the lack of responsibility and meaningful work assignments or with the leadership roles given them. In other cases, discussion revealed that NCOs were reacting negatively to being held too accountable for actions of E1-E4s. Seven commanders found that E1-E4s' ratings of NCOs were substantially lower than NCOs ratings of themselves. In most instances, commanders were surprised at how positively NCOs rated themselves.

"Discoveries" such as those mentioned above achieved fuller meaning when related to other information - from the survey or otherwise - possessed by the commander. For example, in one company, the commander's becoming aware that NCOs substantially overvalued themselves led the commander to listen more critically to conversational feedback from NCOs. In another company, a sharp decrease in favorable attitudes of E1-E4s toward the company commander, accompanied by a slight increase in favorable attitude toward NCOs, enabled the commander to recognize that his approach to strengthening his chain of command was working, but more slowly and at a greater cost than he realized.

Actions Taken Based on Survey Feedback. Twenty-one of the 43 company commanders stated at the post-project interview that they took specific actions linked to survey data, which had functioned either as the information source or as the catalyst for these actions. In general, commanders had difficulty during the interviews in attributing specific actions to the survey data. They differed greatly in their reports of how salient the data were to their day-to-day functioning. Some stated that their understanding of the data affected all their actions in an indirect way. Others said they filed the data in the bottom drawer and forgot it.

During the interviews with company commanders, actions were reported to have been taken in the following areas:

Relating to E1-E4s. Seven commanders, as a result of the survey data, became more sensitive to the troops. They increased their communication with EM about problem areas within the company (4 commanders), attempted to give troops more recognition and praise (3 commanders), acted as a buffer for troops in interactions with the battalion (1 commander). Two commanders developed orientation programs for new troops that included interviews with the 1st Sergeant and company commander.

Relating to NCOs. Five commanders stated they used the data in instructing or counseling acting sergeants. Another commander decided not to create any more acting sergeants because he felt the company lacked the resources to train them adequately.

Four commanders stated they used the data to instruct or counsel NCOs. In some cases, the data were used to support the commander's assessments of the leadership situation in the company. One headquarters commander used the data in dealings with battalion staff officers. Six commanders attempted to expand NCOs' responsibility over EM discipline and personal matters or gave them opportunities to function in their own skill areas and individual leadership roles. In two cases, commanders felt that NCOs responded negatively to their attempts. They disliked the longer hours and greater accountability for EM actions.

Relating to Junior Officers. Two commanders increased junior officers' responsibility and leadership visibility.

Training. Five commanders reviewed their training programs and attempted to institute changes. Three other commanders decided to become more visible during training. One commander instituted changes through a discussion with the Operations Officer (S-3).

Unit Administration and Services. Two commanders improved the administrative functioning of their orderly rooms, supply sections, or motor pools. Two other commanders attempted to give these areas a "service orientation."

Fairness in Promotions. Three commanders reviewed their promotion procedures. One commander set up a promotion board; another commander published a revised promotion policy.

During interviews, 17 of 25 executive officers stated that commanders used survey results as a basis for actions. In five cases, NCOs were reported to have been given more responsibility; in three cases, attempts were made to improve poor communication between NCOs and E1-E4s; in four cases, attempts were made to improve two-way communication between the commander and E1-E4s. The emphasis in some instances was on better explanations of company policies to the troops, in other instances on incorporating troops' perceptions in future planning and action.

During the post-project interviews 19 of 27 first sergeants said that they believed commander actions were affected by the survey data. Eight reported that commanders took their own leadership ratings very seriously and tried to establish rapport with E1-E4s through giving them more positive rewards and letters of commendation and conducting company-wide meetings. Other reported actions included providing more responsibility to NCOs, counseling NCOs, clarifying promotion policy, stressing fairness in discipline, reallocating personnel in the orderly room, improving personal safety, and attempting to resolve racial problems.

IMPLEMENTATION OF THE OE CYCLE BY COMMANDERS

The OE cycle has four steps: problem diagnosis, action planning, action, and evaluation (see Figure 1). One principle of survey feedback is that the OE cycle should involve high degrees of participation by personnel at each step, and continued communication to personnel about progress.

Commitment to Project. On the mail-back evaluative questionnaires after feedback for Quarters 1, 3, and 4, company commanders reported on their commitment to the survey feedback project, the perceived commitment of their fellow unit commanders, and the perceived commitment of their battalion commanders. In part, "commitment to the project" can be viewed as commitment to use of the OE cycle in the existing organizational environment. Following Quarter 1 feedback, 52% of the company commanders saw themselves as committed to the project "to a great extent" or more, and saw 28% of the other commanders and 37% of the battalion commanders as equally committed (Table 12). The percentages shifted downward following Quarters 3 and 4, a trend in commitment that may be due to one or more of several reasons: Return rate decreased by quarter from 83% to 73% to 65%, perhaps introducing bias. Successively more replacement commanders responded in Quarters 3 and 4, and they would be expected to be less committed than commanders who had completed orientation and training. Commanders present from the beginning appear also to have decreased in commitment over time.

Conduct of Prescribed Meetings. In conjunction with the training provided at Quarter 1, practically all company commanders conducted meetings with subordinates and with their battalion commanders. During training sessions at Quarters 1 and 2, company commanders met as a group with the trainer. Full use of the OE cycle required that meetings be conducted following receipt of survey data at Quarters 3 and 4. Table 13 indicates what meetings were held and how successful the company commanders perceived these meetings to be.

In general, the meetings appear to have been of some value to company commanders. However, fewer commanders held meetings in successive quarters. Although meeting with other unit commanders at Quarter 1 was relatively highly valued, these discussions took place during the training session. Meetings held outside the training session were valued about the same over quarters; however, the fact that fewer meetings were held may mask a decreasing trend in the perceived value of meetings for company commanders over quarters.

Table 12: Questionnaire Responses of Company Commanders: Personal
Commitment to Survey Feedback-Project

Response Occasion	% of Responses				
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Questions: To what degree are <u>you</u> personally committed to the use of the Survey Feedback Project?					
Quarter 1 (n = 50)	4	6	38	36	16
Quarter 3 (n = 44)	16	14	34	29	7
Quarter 4 (n = 39)	20	18	31	26	5
Question: In your opinion, to what degree are the <u>other unit commanders</u> in your battalion committed to the Survey Feedback Project?					
Quarter 1 (n = 50)	6	6	60	14	14
Quarter 3 (n = 43)	9	12	58	21	0
Quarter 4 (n = 38)	16	21	50	8	5
Question: To what degree is your <u>battalion commander</u> committed to the Survey Feedback Project?					
Quarter 1 (n = 49)	6	16	41	31	6
Quarter 3 (n = 41)	12	15	34	32	7
Quarter 4 (n = 35)	20	14	34	20	12

Table 13. Questionnaire Responses of Company Commanders:
Extent and Value of Survey Feedback Meetings

Response Occasion	% of Responses				
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Question: Have you discussed results with any of the <u>other unit commanders</u> in your battalion? If yes, to what extent did you find these discussions valuable?					
Quarter 1 (n = 48)					
Meetings held (100%)					
Value (n = 48)	12	12	21	40	15
Quarter 3 (n = 44)					
Meetings held (64%)					
Value (n = 28)	21	18	46	11	4
Quarter 4 (n = 40)					
Meetings held (35%)					
Value (n = 15)	7	7	53	20	13
Question: Have you discussed results with the <u>officers and/or NCOs of your unit?</u> If yes, to what extent did you find these discussions valuable?					
Quarter 1 (n = 48)					
Meetings held (100%)					
Value (n = 48)	10	23	48	19	0
Quarter 3 (n = 43)					
Meetings held (84%)					
Value (n = 36)	11	22	42	25	0
Quarter 4 (n = 40)					
Meetings held (65%)					
Value (n = 26)	0	35	61	0	4
Question: Have you discussed results with <u>your battalion commander?</u> If yes, to what extent did you find these discussions valuable?					
Quarter 3 (n = 42)					
Meetings held (17%)					
Value (n = 7)	0	14	72	14	0
Quarter 4 (n = 39)					
Meetings held (20%)					
Value (n = 4)	0	25	50	25	0

The 10 battalion commanders who responded to a mail-back questionnaire at the end of the project reported that they had discussed survey results with their company commanders; 70% stated that the results were valuable "to some extent" or more. Seven of the battalion commanders reported discussing results with other personnel in the battalion; 70% stated that the results were valuable "to some extent" or more.

During interviews at the end of the project, 32 of the 43 company commanders reported discussing the data with others. Ten of these simply told others about the results, while the rest shared the data printouts as well. Others involved in discussing the data included executive officers (reported by 23 commanders), platoon leaders (10 commanders), first sergeants (24 commanders), platoon sergeants (7 commanders), all NCOs (9 commanders), and the entire company (6 commanders). The lead interviewer reported that "Good measures of the frequency with which the data were shared were not obtained. It seemed that many commanders shared the data only once after earlier feedback periods."

Of the 11 commanders who reported not sharing the data, 6 had taken command less than two months before the end of the project.

During interviews, 19 of 25 executive officers and 24 of 27 first sergeants reported seeing the data printouts or discussing the results with the company commander. Most commonly, review of printouts and discussions were held in the presence of other officers and senior NCOs.

Feedback to Enlisted Men. Although it is clear that, in accord with the intention of the OE cycle, some feedback to enlisted men took place in some companies, feedback was far from pervasive. Only 9% of the enlisted men reported that they learned of survey results "to a great extent" or more (Table 14). About 55% reported learning of survey results "to a very little extent."

Apparently many commanders did not effectively communicate to their troops that they were truly interested in results of the survey. Only 10% of E1-E4s and 12% of NCOs reported that they believed "to a great extent" or more that commanders took the data seriously (Table 15).

Use of Unit Planning Records. As the action-planning stage of the OE cycle is completed, plans should be documented. The Unit Planning Record was prepared for that purpose. As indicated below, completed OE cycles were the exception rather than the rule in the survey feedback pilot project. Following Quarter 1, 27% of the commanders returned completed Unit Planning Records to the researchers as requested; 15% returned them following Quarter 2, and 13% following Quarter 3. Others either did not return them or sent them back uncompleted with comments such as:

Not completed.

I don't use this. I am only concerned with significant percentages on questions answered. The commander is the person responsible for trends. My approach is to identify those people who are down on the unit and to move them out.

Not completed. I simply do not have the available time (my own or the NCOs) to plan this type of action.

No meetings as of this date due to other commitments.

No discussions of the feedback were conducted due to preparation for and conduct of the AGI inspection.

I did not discuss this quarter's survey since the sample was so small that I considered the survey to be invalid.

Reason for no meetings: Unit involved in Corps TEI and field duty.

Commander medically evacuated. Form not completed.

Table 14. Questionnaire Responses of Enlisted Men: Amount of Feedback

	% of Responses				
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Feedback Conditions:					
E1-E4 (n ~ 2,350)	54	17	19	7	2
E5-E8 (n ~ 1,140)	56	15	19	6	3

Note. Ns are approximate.

Table 15. Questionnaire Responses of Enlisted Men:
Perceptions of Commanders' Use of Survey Data

Question: To what extent do you believe the previous survey data were taken seriously and used by the unit commander?					
% of Responses					
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Feedback Conditions:					
E1-E4 (n ~ 2,350)	41	21	28	7	3
E5-E8 (n ~ 1,140)	38	21	29	8	4

Note. Ns are approximate.

REACTIONS TO THE PILOT PROJECT ADMINISTRATION AND MATERIALS

Timing of Survey Administration and Feedback. During interviews at the end of the project, all but one of the company commanders (n = 28) said they believed that quarterly administration of the survey questionnaire was the appropriate frequency.

Questionnaire Administration. Researchers who administered the survey questionnaires to troops in unit settings felt uncomfortable about the quality of data being obtained. Sometimes the physical setting was inadequate. On some occasions, a general unruliness prevailed before and after the period of silence while the questionnaire was being completed. Negative comments about completing the questionnaire were not infrequent.

During Quarter 3 questionnaire administration, a special procedure was instituted to determine the number of unacceptable response sheets. On the average, 7% of the response sheets were discarded as invalid. In 31% of the companies, 10% or more of the questionnaire response sheets were discarded (Table 16). The proportion of discarded response sheets from feedback companies (.077) did not differ significantly from the proportion (.063) from no-feedback companies ($z = 1.56$, ns).

The number of enlisted men who completed the survey questionnaire varied by quarter (Table 17). Response sheets judged to be valid at Quarters 1, 3, and 4 represent 50%-60% of the assigned strength for both E1-E4s and NCOs. Far fewer enlisted men completed the questionnaire at Quarter 2, valid response sheets being obtained for only 25%-30% of the assigned strength.

Table 16. Percentage of Survey Questionnaire Response Sheets Discarded at Quarter 3 Data Collection

Percentage Discarded	Number of Feedback Companies	Number of No-Feedback Companies
0	8	2
1-4	15	1
5-9	17	10
10-14	13	2
15-19	4	0
20-24	2	0
25	1	0
	<u>60</u>	<u>15</u>

Note: Criteria for discarding response sheets: Those believed invalid, generally those completed with an obviously artificial or illogical pattern of responses, completed too quickly for questions to have been read, or those on which no demographic items had been completed and only a few of the other items.

Table 17. Number of Enlisted Men Providing Valid Responses to the Survey Questionnaire, By Quarter

Feedback Variation	Q1		Q2		Q3		Q4	
	E1-E4	E5-E8	E1-E4	E5-E8	E1-E4	E5-E8	E1-E4	E5-E8
Civilian Coach	689	222	289	114	608	250	649	300
Military Monitor	548	233	215	84	554	246	558	295
Structured Seq	1197	493	562	232	1170	514	1147	542
No Feedback	617	223	329	133	501	250	570	235
Totals	3051	1171	1395	563	2833	1260	2924	1372

ARI RPR 77-2

When asked to what extent they believed their responses were kept confidential, only 38% of the E1-E4s and 47% of the NCOs responded "to a great extent" or more (Table 18). About the same percentages (41% and 52%, respectively) said that they liked completing the questionnaire (Table 19). As these two questions were asked after they had completed the Quarter 4 survey questionnaire, ample time had elapsed for personnel to learn that individual responses had actually been kept confidential if such learning were to occur, and the troops had enough experience in completing the questionnaire to judge how well they liked doing it.

Survey Feedback Training. Between Quarter 1 training at the time of initial feedback and data collection for Quarter 2, company commanders responded by mail to the first evaluative questionnaire. To two questions on effectiveness of the training they had recently received, more than half reported it was both valuable and relevant "to a great extent" or more (Table 20).

During the interviews after Quarter 4, 16 company commanders who had received the initial training were asked about it. A majority stated that the training was informative and helpful. However, commanders in three battalions said that they had not read the manual sufficiently because their battalions were experiencing heavy commitments at the time of the training; they felt inadequately attuned to the training, which was experienced as an interruption. Three commanders indicated that the training was uninteresting and that they were merely fulfilling a requirement in attending; two others felt the training was too difficult and too short; and one other believed that too much emphasis was placed on the mechanics of survey interpretation.

The same interviews revealed that of 23 commanders who were not in command at the time of the initial training, 12 received no training or briefing, 7 were briefed by the civilian coaches, 2 were briefed by the military monitors, and 2 were briefed by the commanders they replaced. Many of those who received no briefing used the training manual as an orientation to survey feedback. These commanders considered lack of a formal orientation to the project to be a deficiency.

Training Manual. During post-project interviews, 29 company commanders were asked about the usefulness of the training manual. Ten commanders reported a positive attitude, describing the manual as readable, usable, and helpful. Nine did not find it to be generally relevant and worthwhile, and said its usefulness was limited to helping them interpret and graph data. The remaining 10 commanders had no opinion because they had not read the manual or had read it superficially.

Survey Questionnaires. More than half the battalion and company commanders responding to evaluative questionnaires at Quarters 1, 3, and 4 reported that "to a great extent" or more the survey data were accurate in describing the perceptions of enlisted men in their units (Table 21).

Table 18. Questionnaire Responses of Enlisted Men: Belief in the Confidentiality of their Survey Questionnaire Responses

Question: To what extent do you believe your individual answers to the survey were actually kept confidential?					
% of Responses					
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Feedback Conditions:					
E1-E4 (n ~ 2,350)	19	13	30	17	21
E5-E8 (n ~ 1,140)	16	10	27	17	30

Table 19. Questionnaire Responses of Enlisted Men: Feelings About Completing the Survey Questionnaire

Question: How do you feel about answering the blue-covered questionnaire so that your unit commander can receive the summarized results?					
% of Responses					
	Dislike Very Much	Dislike It	Don't Care	Like It	Like Very Much
Feedback Conditions:					
E1-E4 (n ~ 2,350)	9	11	39	25	16
E5-E8 (n ~ 1,140)	7	7	34	32	20

Table 20. Questionnaire Responses of Company Commanders:
Perceived Value and Relevance of Initial Training Sessions

Question: To what extent did you profit from the Survey Feedback training sessions conducted by Dr. Leader, Dr. Brimm, or Dr. Holmes?

Question: To what extent was the content of the training sessions relevant to you?

Item	% of Responses				
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Profit From Training Sessions (n = 49)	4	16	23	47	10
Relevance of Training Sessions (n = 50)	4	10	32	46	8

Table 21. Questionnaire Responses of Company and Battalion Commanders:
Perceptions of Accuracy of Troop Responses to Survey Questionnaire

Question: How accurate were the survey feedback data in describing the perceptions of your EM and NCOs?

	% of Responses				
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Company Commanders					
Quarter 1 (n = 48)	0	11	33	48	8
Quarter 3 (n = 44)	7	4	39	43	7
Quarter 4 (n = 39)	0	0	46	44	10
Battalion Commanders					
Quarter 4 (n = 9)	0	0	33	50	11

During the post-project interviews, 19 of the 43 company commanders reported without qualifications that the survey data were accurate. Six commanders disregarded the data because they believed it to be inaccurate, while 18 believed that although the data were generally sound they should be viewed cautiously. Most commanders believed that recent company events such as major field training exercises, heavy detail and guard commitments, and personnel turnover had influenced survey questionnaire responses. Three commanders believed that the results were biased because poorer quality troops were more available to take the survey, and 13 commanders believed that troops' negative attitudes toward the Army in general were reflected in troop responses to questions about specific aspects of unit functioning.

During post-project interviews, 13 of 14 company executive officers and 18 of 24 first sergeants reported their belief that although the survey required interpretation, it provided company commanders with an accurate picture of troops' perceptions. Four executive officers and seven first sergeants who believed in the accuracy of the survey emphasized their belief that recent events had shaped troop responses to some extent. Three first sergeants who did not believe in the accuracy of the survey believed that troops had used the opportunity to "get back at" the company commander and that their responses were not honest.

In the evaluative questionnaire immediately following the Quarter 4 survey questionnaire administration, enlisted men were asked how honest they had been in completing the survey questionnaire. About two-thirds of the E1-E4s and four-fifths of the NCOs said they were honest "to a great extent" or more (Table 22).

Individual survey questionnaire items were evaluated by 35 company commanders at the end of the project, on a mail-out form returned during the post-project interviews. Table 23 shows that commanders were in favor of retaining 90% of the items.

Feedback Printout. The same sample of company commanders who evaluated the individual survey questionnaire items also evaluated all components of the computer printout which provided them with feedback. Two-thirds of these commanders reported that the separate data summaries by E1-E4 and E5-E8 were sufficient, while the remainder said they would prefer more information. Almost 20% of the sample group preferred four sets of data: E1-E3, E4, E5, and E6-E8. Most commanders (61%) did not want information separated additionally by race, while 31% desired a breakout by "black, white, and other." Commanders agreed (94%) that additional breakouts other than for rank and race were not worth considering.

Less than 10% of the commanders suggested that additional summary statistics (e.g., percentiles, medians) should be included in the printout. Some of the statistics provided were more highly valued than others; for example, on a 5-point scale, "comparisons of own data between quarters" was highly valued (mean = 3.91) while data on the number of people taking the questionnaire but not answering the specific question were less valued (mean = 2.31).

Table 22. Questionnaire Responses of Enlisted Men: Reported Honesty of Survey Questionnaire Responses

Question: To what extent were you honest in answering the questions on the blue-covered questionnaire?					
% of Responses					
	To a Very Little Extent	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent
Feedback Conditions:					
E1-E4 (n ~ 2,350)	9	9	14	19	49
E5-E8 (n ~ 1,140)	5	5	10	21	59
No-Feedback Condition:					
E1-E4 (n ~ 570)	9	7	12	22	50
E5-E8 (n ~ 235)	2	6	9	17	66

Note. Ns are approximate.

Table 23. Mean Ratings By Company Commanders of Value of Individual Survey Questionnaire Items
(n = 33 to 35)

Question on each of the 76 Survey Questionnaire items:		
Should this item be retained in future surveys because of importance, inherent utility, or personal interest of the resultant data?		
Category	Mean Rating	No. of Items
5.00 Definitely should be retained	4.50 - 5.00	4
4.00 Should be retained if possible	4.00 - 4.99	39
	3.50 - 3.99	35
3.00 Good question but not necessary	3.00 - 3.49	7
	2.50 - 2.99	1
2.00 Could be eliminated	2.00 - 2.49	0
1.00 Definitely should be eliminated	1.00 - 1.99	0
		Total 76

Unit Planning Records. In practice, the Unit Planning Records were used too infrequently to yield representative information about their value.

Survey Feedback Summary Data Sheet Display. Most commanders did not use the data sheet displays after Quarter 1. They reported that the display sheets, although of some use, took more time and trouble to complete than they were worth.

SUMMARY AND CONCLUSIONS

The effect of this pilot project may be considered from two general perspectives: (1) the acceptability and feasibility of the survey feedback cycle as a tool of military management, and (2) its effectiveness as an instrument of change for the better in the military institutional environment.

A moderately favorable outlook for feasibility can be deduced from the results: Experience with survey feedback as administered in the participating battalions indicates that troops willingly complete a quarterly survey, that commanders pay attention to the results, and that commanders consider the feedback process useful in some ways in promoting insight and communication. Some commanders and their key subordinates, and some enlisted men, reported that survey feedback was valuable to unit operations during the project. Analysis of change over time in responses to attitude and behavior items of the questionnaire were consistent with such reports. Company commanders definitely wish to use quarterly survey feedback as a means of identifying and working on their more important problems. In the organizational environment in which it was applied, the potential value of survey feedback appeared substantial to many respondents.

At the same time, there is no evidence that survey feedback resulted in more than small unit improvement during the research period. Positive changes in survey questionnaire responses, although reliable, were small; unit indicators of discipline and motivation did not show significant improvement; and company commanders did not claim that survey feedback had resulted in major unit improvement.

Two points are important to consider in evaluating the potential value of quarterly survey feedback from results of the pilot project. First, the potential of the technique was evaluated by military personnel in comparison with alternative existing Army mechanisms for problem solving rather than in comparison with other OE techniques. The endorsement, in whatever degree, of survey feedback may have been in part an endorsement of what is common to various OE techniques. Second, the potential value of survey feedback was endorsed as substantial by military personnel working in an organizational environment often in conflict with assumptions underlying survey feedback.

The pilot project reported here is the most comprehensive evaluation of survey feedback in the Army that has been completed. Yet the drawbacks to the research in the form of lack of uniformity in administration and rigor of controls make it difficult to arrive at definitive answers to the evaluation questions. In the context of the Department of the Army's movement to institutionalize organizational effectiveness, the quarterly survey feedback technique could have much to contribute. If a quarterly routine were established, survey feedback could well tend to perpetuate and strengthen itself. A periodic survey could provide an appropriate outlet and proving ground for OE-related skills of military management learned in Army schools and elsewhere. As a routine core activity of OE in the Army, survey feedback might provide a framework in which OE capabilities could continue to develop.

REFERENCES.

- Cohen, S. L., and Turney, J. R. Results of an Organizational Diagnostic Survey of an Army Field Facility Work Environment. ARI Technical Paper 272. January 1976.
- Cunningham, Scott M. USAREUR Field Level Attitude-Motivation Measurement System. Cambridge Communications Group, Report No. 06-1, Contract DAHC 15-73-C-0067, March 1974.
- French, W. L., and Bell, Ch. H. Organization Development: Behavioral Science Interventions for Organization Improvement. Englewood Cliffs, N.J.: Prentice-Hall, 1973.
- Friedlander, F., and Brown, L. D. Organization Development. In M. R. Rosengweig and L. W. Porter (Eds.), Annual Review of Psychology (Vol. 25). Palo Alto, CA., 1974.
- Huse, E. F. Organization Development and Change. New York: West Publishing Co., 1975.
- Stewart, S. R, Christie, C. I., and Jacobs, T. O. Leadership Tasks Performed by U.S. Army Company Commanders in Europe. ARI Research Problem Review 76-16, November 1976.

APPENDIX A
SURVEY QUESTIONNAIRE

For each of the questions on this page think about one of the levels of supervisors or NCOs listed below (for example, Acting Jacks, E-5's & E-6's, etc.). Remember, you are to select scores which represent the group or level of supervisors not specific individuals.

<u>To a VERY LITTLE extent</u>	<u>To a LITTLE extent</u>	<u>To SOME extent</u>	<u>To a GREAT extent</u>	<u>To a VERY GREAT extent</u>
------------------------------------	-------------------------------	---------------------------	------------------------------	-----------------------------------

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

In your unit, to what extent do each of the following demand high standards of performance from their men?

- | | | | | | |
|-------------------|-----|-----|-----|-----|-----|
| 1. Acting Jack(s) | (A) | (B) | (C) | (D) | (E) |
| 2. E-5 & E-6 | (A) | (B) | (C) | (D) | (E) |
| 3. E-7 & E-8 | (A) | (B) | (C) | (D) | (E) |
| 4. First SGT | (A) | (B) | (C) | (D) | (E) |

In your unit, to what extent do each of the following show a real concern for the welfare and progress of their men?

- | | | | | | |
|-------------------|-----|-----|-----|-----|-----|
| 5. Acting Jack(s) | (A) | (B) | (C) | (D) | (E) |
| 6. E-5 & E-6 | (A) | (B) | (C) | (D) | (E) |
| 7. E-7 & E-8 | (A) | (B) | (C) | (D) | (E) |
| 8. First SGT | (A) | (B) | (C) | (D) | (E) |

NOTE: ANSWER CATEGORIES HAVE CHANGED

VERY DISSATISFIED	SOMEWHAT DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT SATISFIED	VERY SATISFIED
----------------------	--------------------------	---------------------------------------	-----------------------	-------------------

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

- | | | | | | |
|--|-----|-----|-----|-----|-----|
| 9. How satisfied are you with the kind of work that you do in the Army? | (A) | (B) | (C) | (D) | (E) |
| 10. How satisfied are you with the availability of off-post facilities? (The places you can go on the economy: shops, night clubs, etc.) | (A) | (B) | (C) | (D) | (E) |
| 11. How satisfied are you with the quality of leadership of the Junior Officers (Lieutenants) in your unit? | (A) | (B) | (C) | (D) | (E) |
| 12. All in all, how satisfied are you with your job in the Army? | (A) | (B) | (C) | (D) | (E) |
| 13. How satisfied are you with the amount of free time you get for recreation? | (A) | (B) | (C) | (D) | (E) |
| 14. How satisfied are you with the concern the Junior Officers (Lieutenants) in your unit show for the men's welfare and progress? | (A) | (B) | (C) | (D) | (E) |

NOTE: ANSWER CATEGORIES HAVE CHANGED

<u>To a VERY LITTLE extent</u>	<u>To a LITTLE extent</u>	<u>To SOME extent</u>	<u>To a GREAT extent</u>	<u>To a VERY GREAT extent</u>
------------------------------------	-------------------------------	---------------------------	------------------------------	-----------------------------------

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

- | | | | | | |
|--|-----|-----|-----|-----|-----|
| 15. To what extent are promotions in your Company (Battery) made fairly? | (A) | (B) | (C) | (D) | (E) |
| 16. To what extent do you feel safe from personal harm or danger on your Kaserne? | (A) | (B) | (C) | (D) | (E) |
| 17. In your Company (Battery) are special duties (details) assigned fairly? | (A) | (B) | (C) | (D) | (E) |
| 18. To what extent have you had an opportunity to complete as much education as you want? (GED, college courses, etc.) | (A) | (B) | (C) | (D) | (E) |
| 19. To what extent does your job require a high level of skill? | (A) | (B) | (C) | (D) | (E) |
| 20. To what extent are you free from conflicting demands made on you by your superiors? | (A) | (B) | (C) | (D) | (E) |
| 21. To what extent has your Army training given you job skills that will be useful to you in the future? | (A) | (B) | (C) | (D) | (E) |
| 22. To what extent do unit policies that affect you seem reasonable? | (A) | (B) | (C) | (D) | (E) |
| 23. To what extent do you get enough personal privacy? | (A) | (B) | (C) | (D) | (E) |
| 24. To what extent do you get to work on jobs where you feel you are most skilled? | (A) | (B) | (C) | (D) | (E) |

NOTE: BE SURE OF THE ANSWER CATEGORIES
YOU ARE USING

To a VERY
LITTLE extent
To a LITTLE
extent
To SOME
extent
To a GREAT
extent
To a VERY
GREAT extent

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

25. To what extent is the use of drugs in your Company (Battery) interfering with the men's performance? (A) (B) (C) (D) (E)
26. To what extent are your fellow soldiers friendly and helpful at work? (A) (B) (C) (D) (E)
27. In my opinion, the use of drugs in my Company over the last three months has:

PLEASE MARK ONE SPACE ON THE ANSWER SHEET

Increased a Great Deal	Increased Somewhat	Stayed the Same	Decreased Somewhat	Decreased a Great Deal
<u>(A)</u>	<u>(B)</u>	<u>(C)</u>	<u>(D)</u>	<u>(E)</u>

NOTE: ANSWER CATEGORIES HAVE CHANGED

To a VERY
LITTLE extent
To a LITTLE
extent
To SOME
extent
To a GREAT
extent
To a VERY
GREAT extent

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

28. To what extent does the amount of drug use in your Company (Battery) bother you? (A) (B) (C) (D) (E)

NOTE: ANSWER CATEGORIES HAVE CHANGED

VERY POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
--------------	------	------	--------------	-----------

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

- | | | | | | |
|---|-----|-----|-----|-----|-----|
| 39. Compared with other mess halls, how would you rate the food you are getting in your present unit? | (A) | (B) | (C) | (D) | (E) |
| 40. How would you rate your supply room for providing adequate supplies and services (for example, clean sheets, toilet paper, etc.)? | (A) | (B) | (C) | (D) | (E) |
| 41. How would you rate your present living quarters? | (A) | (B) | (C) | (D) | (E) |
| 42. How would you rate the way your Company (Battery) supplies you with the parts, materials, tools and equipment that you need to do your job? | (A) | (B) | (C) | (D) | (E) |

NOTE: ANSWER CATEGORIES HAVE CHANGED

TO A VERY LITTLE extent	TO A LITTLE extent	TO SOME extent	TO A GREAT extent	TO A VERY GREAT extent
----------------------------	-----------------------	-------------------	----------------------	---------------------------

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

- | | | | | | |
|---|-----|-----|-----|-----|-----|
| 43. To what extent does your Company Commander (CO) encourage his men to give their best efforts? | (A) | (B) | (C) | (D) | (E) |
| 44. To what extent does your CO attempt to learn about his men's problems? | (A) | (B) | (C) | (D) | (E) |

NOTE: BE SURE OF THE ANSWER CATEGORIES
YOU ARE USING

<u>To a VERY LITTLE extent</u>	<u>To a LITTLE extent</u>	<u>To SOME extent</u>	<u>To a GREAT extent</u>	<u>To a VERY GREAT extent</u>
------------------------------------	-------------------------------	---------------------------	------------------------------	-----------------------------------

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

- | | | | | | |
|--|-----|-----|-----|-----|-----|
| 45. To what extent does your CO demand high standards of performance from his men? | (A) | (B) | (C) | (D) | (E) |
| 46. To what extent does your CO show a real concern for his men's welfare and progress? | (A) | (B) | (C) | (D) | (E) |
| 47. To what extent do you respect your CO as a "leader of men"? | (A) | (B) | (C) | (D) | (E) |
| 48. To what extent does your CO respect your dignity and treat you like a man? | (A) | (B) | (C) | (D) | (E) |
| 49. To what extent does your CO give discipline fairly? | (A) | (B) | (C) | (D) | (E) |
| 50. To what extent do you have trust and confidence in your CO? | (A) | (B) | (C) | (D) | (E) |
| 51. To what extent is your CO fair in dealing with his men? | (A) | (B) | (C) | (D) | (E) |
| 52. To what extent does your CO "give" as much as he expects to "get" from his men? | (A) | (B) | (C) | (D) | (E) |
| 53. To what extent are you proud to be a member of your Company (Battery)? | (A) | (B) | (C) | (D) | (E) |
| 54. To what extent would your Company (Battery) be ready in the event of combat? | (A) | (B) | (C) | (D) | (E) |
| 55. To what extent do you feel your Company (Battery) is one of the better units in USAREUR? | (A) | (B) | (C) | (D) | (E) |

56. On the basis of your experience and information, how would you rate your Company effectiveness in fulfilling its mission or achieving its goals in comparison with other companies in the Battalion? Choose the one that best applies to your Company (Battery).

PLEASE MARK ONE SPACE ON YOUR ANSWER SHEET

My Company does a <u>very</u> <u>poor</u> job	My Company does a <u>fair</u> job	My Company does a <u>good</u> job	My Company does a <u>very</u> <u>good</u> job	My Company does an <u>excellent</u> job
(A)	(B)	(C)	(D)	(E)

NOTE: ANSWER CATEGORIES HAVE CHANGED

VERY DISSATISFIED	SOMEWHAT DISSATISFIED	NEITHER SATISFIED NOR DISSATISFIED	SOMEWHAT SATISFIED	VERY SATISFIED
----------------------	--------------------------	---------------------------------------	-----------------------	-------------------

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

57. Considering your skills and the effort you put in, how satisfied are you with what the Army is giving you in return?
- (A) (B) (C) (D) (E)
58. How satisfied are you with the amount of opportunity you get to do your job in a new or better way?
- (A) (B) (C) (D) (E)
59. Taking all things together, how satisfied are you with your life in the Army?
- (A) (B) (C) (D) (E)

NOTE: ANSWER CATEGORIES HAVE CHANGED

To a VERY LITTLE extent	To a LITTLE extent	To SOME extent	To a GREAT extent	To a VERY GREAT extent
----------------------------	-----------------------	-------------------	----------------------	---------------------------

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

- | | | | | | |
|---|-----|-----|-----|-----|-----|
| 60. To what extent are you proud to be a member of your Battalion? | (A) | (B) | (C) | (D) | (E) |
| 61. To what extent are you seen as a good soldier by your superiors? | (A) | (B) | (C) | (D) | (E) |
| 62. To what extent are you free from harassment in your unit? | (A) | (B) | (C) | (D) | (E) |
| 63. To what extent do you feel your present Battalion is one of the better Battalions in USAREUR? | (A) | (B) | (C) | (D) | (E) |
| 64. To what extent do superiors in your unit keep their promises? | (A) | (B) | (C) | (D) | (E) |
| 65. To what extent is your work interesting? | (A) | (B) | (C) | (D) | (E) |
| 66. To what extent are you proud of the type of work you do in the Army? | (A) | (B) | (C) | (D) | (E) |

For each of the following questions, please indicate whether things have become better or worse in the past 2-3 months for each of the questions below.

NOTE: ANSWER CATEGORIES HAVE CHANGED

DECREASED A
GREAT DEAL
DECREASED
SOMEWHAT
STAYED THE
SAME
INCREASED
SOMEWHAT
INCREASED A
GREAT DEAL

PLEASE MARK ONE SPACE ON THE
ANSWER SHEET FOR EACH QUESTION

- | | | | | | |
|---|-----|-----|-----|-----|-----|
| 67. The effectiveness of garrison training has: | (A) | (B) | (C) | (D) | (E) |
| 68. The effectiveness of field training has: | (A) | (B) | (C) | (D) | (E) |
| 69. Your enjoyment of your work has: | (A) | (B) | (C) | (D) | (E) |
| 70. The leadership ability of the NCOs who you have contact with has: | (A) | (B) | (C) | (D) | (E) |
| 71. The concern your unit commander has for his men has: | (A) | (B) | (C) | (D) | (E) |
| 72. The capacity of your unit commander to bring out the best efforts of his men has: | (A) | (B) | (C) | (D) | (E) |
| 73. The pride men have in your unit has: | (A) | (B) | (C) | (D) | (E) |
| 74. Your unit's mission readiness has: | (A) | (B) | (C) | (D) | (E) |
| 75. Your own satisfaction has: | (A) | (B) | (C) | (D) | (E) |

76. Has your attitude toward the Army changed since you were assigned to this unit?

PLEASE MARK ONE SPACE ON THE ANSWER SHEET

- A. My attitude toward the Army has become much less favorable since I came here.
- B. My attitude toward the Army has become somewhat less favorable since I came here.
- C. My attitude toward the Army has not changed since I came here.
- D. My attitude toward the Army has become somewhat more favorable since I came here.
- E. My attitude toward the Army has become much more favorable since I came here.

APPENDIX B

SUMMARY OF INTERVIEWS WITH BATTALION
COMMANDERS AT CONCLUSION OF PROJECT

Ten battalion commanders were interviewed by ARI's survey feedback evaluation team. In general, battalion commanders had more highly developed opinions and more clearly formulated evaluations concerning survey feedback than did company commanders. The evaluations by battalion commanders were more varied and more extreme than those of company commanders, ranging from very positive to very negative. Of the ten battalion commanders interviewed, four were strong supporters of survey feedback; three were moderate supporters; one had reservations about survey feedback; two were negative. All interviewed battalion commanders' evaluations of survey feedback are summarized below, together with the written evaluations from the remaining two battalion commanders who were unable to be present for interviews.

Two battalion commanders gave survey feedback an enthusiastic endorsement and made extensive use of the survey data.

BATTALION 1

In Battalion 1, survey data were the stimulus for the formulation of a number of policies and the development of various programs. The commander stated that survey feedback made him more aware of the necessity to take actions that he was considering or provided him with new information that became the basis for his actions. The battalion commander linked survey feedback to the following actions:

NCOs. To improve low A-J leadership ratings, a 40-hour junior NCO leadership training program was established in the battalion. The sergeant major was the primary instructor. Due to low NCO concern and fairness ratings, a course dealing with interpersonal communications, counseling, and maintaining fairness in discipline was added to a battalion-run education program for NCOs. The battalion chaplain taught that course. The battalion commander also met personally with all the NCOs concerning these issues.

EM. In response to EM's perception that promotion and selection policies were unfair, the sergeant major reviewed all past promotions. In conjunction with the battalion commander, he established a promotion board and the policy of explaining to individuals the reasons for their failure to be promoted. Battalion NCOs were given major responsibility in this area. To give recognition to outstanding EM, a monthly awards system was established. Attempts were made to improve recreation facilities and increase personal privacy.

Battalion Officers. To improve the leadership ratings of company commanders and junior officers, some of the company-level administrative workload was centralized and performed by the battalion staff, thereby freeing company commanders to spend more time with their troops. To increase junior officers' visibility, they were required to spend one half to one hour a day becoming acquainted with troop work-load and personal problems.

Training. After studying garrison training facilities, it was decided to phase out garrison training and place a greater emphasis on preparing for and improving field training while in garrison.

This battalion commander felt such factors as negativity toward the Army reduced the accuracy of troops' assessments of leadership and unit functioning. However, this commander felt it was important to be aware of inaccurate perceptions. If after study, certain perceptions were found to be invalid, they could be re-shaped by better information and communication.

This commander believed that Division, rather than Corps and Brigade, could make the best use of results summarized across subordinate units. He believed that commanders' confidentiality should be preserved at all levels. He stated "I am glad I don't see company data. I'm human and might misuse the information."

BATTALION 2

In Battalion 2, the battalion commander felt the survey was an excellent management tool at company and battalion levels and that it could provide his superiors a good assessment of "people readiness," an area in which good information and measures are not usually available. He stated, "This has probably been one of the most beneficial things I have seen done." He employed the survey in the following ways:

1. The survey data were used as a basis for action. In response to low junior officer ratings, the battalion commander conducted classes on leadership. He discussed the problems of troop boredom with company commanders.

2. The survey data were used to keep him informed of the social-psychological aspects of his command. He felt that a down-turn in racial attitudes noted in the survey may have prepared him to deal with "a near racial incident on post." He was surprised at troops' lack of knowledge of opportunities for skill development and education. He attempted to improve information flow in this area. He stated, "A lot of commanders go through a tour without ever thinking about many of the issues brought out by the survey."

3. The survey was used as a measure of the effectiveness of command actions. For example, the survey data assured the commander that his attempts to improve the dining facilities were successful.

4. At officers' call, he encouraged subordinate commanders to use the company data they received.

This commander believed that the survey was accurate and that data summarized across subordinate units should be given to commanders up to USAREUR level. He felt that the survey should be administered by regional personnel centers to avoid "tinkering with the data." In his opinion, questions on PX and club facilities and on security on post and in the company area should be included. Junior officers should also be allowed to take the survey, he maintained.

BATTALIONS 3 AND 4

The next two battalion commanders were equally enthusiastic about survey feedback but found it more difficult to implement action plans in their commands. In Battalion 3, the battalion commander considered survey feedback a valuable tool. He organized meetings at which battalion data were discussed. At the meetings, company commanders identified weak and strong areas in their own commands, discovered similarities in their problems, and attempted to identify corrective action. The battalion commander believed that this diagnostic process predisposed commanders to talk with NCOs more frequently about problems and thereby increase the NCO's sense of inclusion in the functioning of the command. However, the operational requirements and troop commitments were so heavy in the battalion that there was no opportunity to implement any of their planned actions. He stated, "We did not make full use of it (survey feedback). In retrospect, it possibly should have been the first priority."

The data were seen as affected by such recent battalion-wide activities as inspections and major training events. Therefore, in his opinion, in order to obtain reliable results, the battalion commander should determine when the survey should be administered.

This commander was in favor of Army-wide use of survey feedback. However, he felt that commanders should be given more training in formulating and implementing action plans, and "indoctrination" in the value of survey feedback. He felt that results summarized across all subordinate units should be given to all commanders up to USAREUR level. This commander expressed strong feelings about preserving commanders' confidentiality. He felt that knowledge of disclosure would produce attempts at biasing the data.

In Battalion 4, the battalion commander believed that the survey was well constructed, had a good scope, and accurately reflected troops' perceptions and attitudes. The survey was seen as providing information that was not available through face-to-face interactions. He discussed the survey data with his company commanders. However, diagnosing problems, planning actions, and evaluating those actions demanded an amount of time that the commander did not perceive to be available to him. This battalion commander was disappointed that "survey feedback was pressed out of use by other demands." This failure to implement survey feedback to a fuller extent was attributed to a lack of command emphasis. He stated, "It could not be important to me, because it was not visible to my boss." However, he felt the potential value of survey feedback would be realized only if it had a command emphasis which legitimized spending time improving data trends and a command emphasis in which career anxiety was reduced. In his opinion, data on troop perception summarized across subordinate units should be given to higher commands as a balance to their relying on statistical information in other areas.

BATTALIONS 5, 6, AND 7

Three battalion commanders were moderately positive about survey feedback. In Battalion 5, the battalion commander stated that survey feedback assisted him in assessing many areas of his command, in identifying trends, and in guiding him in "honing in on problem areas." Survey feedback was seen as helping him and the company commanders in maintaining an awareness of critical problem areas. Before taking many actions, they considered the information provided by survey feedback. He felt that survey feedback was of sufficient benefit to him and the battalion that it was cost effective. After studying with company commanders dissatisfactions identified in the survey data, he concluded that many problems stemmed from a lack of interest in training. A major effort was undertaken to improve training, though lack of funds and training facilities were seen as frustrating these plans to an extent.

In Battalion 6, the battalion commander felt that being aware of positive and negative trends in the data was valuable. He discussed the data with subordinate commanders. He did not link any specific actions to survey feedback. He was in favor of survey feedback being used Army-wide. He was the only one of the commanders positively disposed to survey feedback who stated that feedback should stop at battalion level. He feared superior commanders would overreact in a punitive way.

In Battalion 7, the battalion commander indicated that he wanted survey feedback to be continued. He stated, "The survey should include what the unit has been involved in doing in the past 30 days, what it's doing presently, and what lies ahead 30 days."

BATTALION 8

One commander had reservations about survey feedback. In Battalion 8, the commander did not feel that survey feedback assisted him in his responsibility to achieve combat readiness, and therefore he questioned its cost effectiveness for the Army. In his opinion, a battalion's success is contingent upon its expending all of its time and energy in meeting immediate demands and requirements of higher commands. In speaking of his inability to utilize survey feedback he stated, "In this environment we live in, only the fittest survive - we are going fast and furious and have too many immediate pressures." The reflective, time-consuming survey feedback process was seen as out of "synch" with that environment. His success at meeting those requirements suggested to him that survey feedback was not necessary to accomplish his mission. He believed he had to be convinced of the value of survey feedback. He stated that commanders should receive better training in understanding how survey feedback could assist them in achieving their mission and how the survey data could best be utilized.

The survey data were seen as accurate. This battalion commander felt that data comparison with similar battalions helped him understand the extent of problems within his battalion. However he stated further, "We know what is wrong, no one need tell us that; we need help to solve problems, not identify them. They are very obvious to us." He believed that what he needed as a battalion commander was more "independence" to take action to solve problems.

In summary, lack of time and perceived lack of authority to take actions inhibited this commander's use of survey feedback. He also was not fully convinced that improving trends in the survey feedback data would improve his combat readiness. He felt that survey feedback should go operational only after a cost-effectiveness study was done.

BATTALIONS 9 AND 10

Two commanders were opposed to survey feedback becoming an operational requirement. The commander in Battalion 9 stated that survey feedback did not give him any new information. He felt that he maintained good direct contact with EM and expressed his concern for them by assisting them with housing, pay and supply problems.

He had difficulty in determining the meaning of data for unit leadership and unit functioning. The data were seen as unwieldy and essentially uninterpreted. He believed that the data would be given "biased interpretations" by commanders.

The data were seen as strongly influenced by recent events such as success at training test, or problems experienced in preparing for an AGI. He felt that this information could better be collected in an annual DA survey and given to superior commanders who could better utilize the data. This commander felt the money spent in survey feedback could be better used improving post facilities and training.

In Battalion 10, the battalion commander felt that an operational survey feedback system would have negative effects. EM were seen as lacking conscious awareness of the sources of their dissatisfaction. Their dissatisfaction was seen as stemming from a lack of identification with a meaningful set of values and beliefs. They lacked a sense of identity as soldiers, Americans or men. Survey feedback was seen as having a negative effect because in responding to the survey questions, the impression would be created among troops that the areas covered in the survey were the real source of their dissatisfaction. This labelling process was seen as counterproductive to the commanders' own change goals.

BATTALIONS 11 AND 12

Two battalion commanders were not interviewed. Both returned the evaluation questionnaire. The commander in Battalion 11 responded "to some extent" to all the questions. He was in favor of continuing survey feedback. He commented on the questionnaire, "The 'yes' answers to #7 and #8 (i.e., continuation of survey feedback) assume that the cost and personnel requirements of continuing these quarterly surveys would not be too great." The battalion XO was interviewed. He had discussed the data with the battalion commander. He stated that the battalion commander found the data helpful and useful in orienting him to the battalion. The example was given of the battalion commander becoming aware of junior officers' dissatisfaction with their role. The battalion XO felt the survey data were accurate. He supported survey feedback. He did express strong concern about a military-administered survey feedback. He was not sure that confidentiality could or would be maintained and was concerned that the data might be misused to evaluate commanders.

The battalion commander in Battalion 12 did not want survey feedback continued and responded "to a very little extent" to most questions on the evaluation questionnaire. In response to the questions concerning the value of survey feedback-related discussions with company commanders, he stated, "not based upon the survey results but the topics the survey caused to be raised." The battalion S-3 was interviewed. He supported survey feedback and thought that the battalion commander held the same opinion. He studied the printouts privately. He stated, "People need a way to interpret the data and act upon the data." He believed that interpretations of the data and the relationship of the data to morale and performance should be made available. He felt that the greatest value in survey feedback was in giving commanders feedback about their own performance. He was the only field grade officer who believed that the data of individual subordinate units should be given to higher commands. The policy was consonant with his belief in openness and honesty. He believed that the survey should be administered by a battalion project officer.

APPENDIX C

MEAN RESPONSES OF ENLISTED MEN, BY ITEM BY QUARTER BY CONDITION, TO THE SURVEY QUESTIONNAIRE (page 1 of 8)

Feedback Groups. Data which follow are in the following order: Feedback Group I - Quarter I, Feedback II - Quarter I, No Feedback - Quarter I, Feedback Group I - Quarter 2, and so on to No Feedback - Quarter 4. The F ratio is in parenthesis. Degrees of freedom for the treatment by quarter interaction are 6 and, for E1-E4, approximately 10,000, and for E5-E8, approximately 4,200. A statistically significant (.01 level) F ratio is 2.81 or above and is indicated by an asterisk (*).

Item	EM	I/Q1	II/I1	NF/I1	I/Q2	II/I2	NF/I2	I/Q3	II/I3	NF/I3	I/Q4	II/I4	NF/I4	F Ratio
1	E1-E4	2.48	2.63	2.55	2.37	2.55	2.42	2.68	2.60	2.46	2.63	2.56	2.46	(2.37)
	E5-E8	2.50	2.58	2.46	2.52	2.57	2.41	2.53	2.54	2.41	2.73	2.64	2.57	(.22)
2	E1-E4	3.04	3.07	2.98	2.95	3.00	2.94	3.06	3.05	2.92	3.01	2.97	3.03	(.87)
	E5-E8	3.50	3.37	3.40	3.33	3.37	3.40	3.33	3.50	3.17	3.36	3.49	3.53	(2.34)
3	E1-E4	3.40	3.28	3.35	3.34	3.40	3.26	3.42	3.38	3.30	3.32	3.25	3.26	(.74)
	E5-E8	3.75	3.67	3.45	3.61	3.60	3.48	3.60	3.63	3.32	3.55	3.55	3.69	(2.11)
4	E1-E4	3.75	3.68	3.76	3.65	3.75	3.62	3.71	3.69	3.63	3.72	3.52	3.58	(1.26)
	E5-E8	4.12	3.87	3.90	3.97	4.02	3.81	3.92	3.96	3.51	3.84	3.73	3.91	(3.03)*
5	E1-E4	2.20	2.31	2.27	2.02	2.45	2.29	2.33	2.35	2.24	2.23	2.28	2.15	(3.14)*
	E5-E8	2.33	2.50	2.32	2.35	2.35	2.31	2.53	2.57	2.36	2.66	2.51	2.43	(.75)
6	E1-E4	2.53	2.57	2.69	2.41	2.58	2.56	2.62	2.66	2.55	2.62	2.60	2.43	(.97)*
	E5-E8	3.43	3.35	3.45	3.21	3.25	3.31	3.43	3.37	3.12	3.27	3.37	3.33	(1.66)
7	E1-E4	2.63	2.66	2.67	2.57	2.57	2.61	2.70	2.82	2.61	2.70	2.71	2.57	(1.30)
	E5-E8	3.45	3.45	3.40	3.33	3.38	3.14	3.33	3.39	3.10	3.24	3.19	3.34	(1.38)
8	E1-E4	2.87	2.79	3.11	2.79	2.77	2.83	2.83	3.07	2.78	2.89	2.88	2.83	(4.10)*
	E5-E8	3.63	3.44	3.52	3.66	3.60	3.28	3.61	3.65	3.15	3.37	3.39	3.58	(3.84)*

ARI RPR 77-2

APPENDIX C
(page 2 of 8)

<u>Item</u>	<u>EM</u>	<u>I/Q1</u>	<u>II/1</u>	<u>NF/1</u>	<u>I/Q2</u>	<u>II/2</u>	<u>NF/2</u>	<u>I/Q3</u>	<u>II/3</u>	<u>NF/3</u>	<u>I/Q4</u>	<u>II/4</u>	<u>NF/4</u>	<u>F ratio</u>
9	E1-E4	2.47	2.47	2.57	2.49	2.43	2.42	2.56	2.57	2.39	2.53	2.59	2.41	(1.37)
	E5-E8	3.29	3.28	3.25	3.24	3.25	3.19	3.37	3.29	3.02	3.22	3.12	3.41	(1.61)
10	E1-E4	2.20	2.33	2.16	2.18	2.14	1.93	2.34	2.23	2.05	2.21	2.20	2.06	(1.03)
	E5-E8	2.14	2.32	2.11	2.08	2.39	1.97	2.43	2.48	2.06	2.26	2.24	2.20	(1.43)
11	E1-E4	2.49	2.62	2.53	2.43	2.48	2.43	2.57	2.71	2.46	2.55	2.61	2.44	(.69)
	E5-E8	2.77	2.74	2.66	2.60	2.75	2.58	2.84	2.88	2.54	2.83	2.69	2.75	(1.11)
12	E1-E4	2.37	2.40	2.48	2.44	2.38	2.22	2.53	2.51	2.35	2.47	2.55	2.40	(1.68)
	E5-E8	3.34	3.23	3.28	3.28	3.30	3.12	3.40	3.33	3.03	3.19	3.11	3.43	(2.15)
13	E1-E4	2.08	2.12	2.39	2.03	1.95	2.01	2.19	2.29	2.27	2.11	2.28	2.11	(3.38)*
	E5-E8	2.50	2.56	2.53	2.50	2.52	2.46	2.71	2.76	2.49	2.43	2.33	2.62	(1.61)
14	E1-E4	2.43	2.46	2.38	2.44	2.43	2.42	2.47	2.51	2.48	2.44	2.54	2.34	(.57)
	E5-E8	2.77	2.66	2.68	2.67	2.72	2.34	2.78	2.88	2.48	2.70	2.59	2.73	(2.28)
15	E1-E4	2.40	2.37	2.40	2.44	2.25	2.25	2.46	2.48	2.30	2.47	2.40	2.28	(1.72)
	E5-E8	3.18	3.03	2.87	3.11	3.12	2.95	3.23	3.16	2.90	3.07	3.03	2.08	(1.06)
16	E1-E4	2.71	2.75	2.65	2.81	2.77	2.69	2.73	2.72	2.62	2.74	2.59	2.64	(.70)
	E5-E8	2.99	3.05	3.07	2.94	3.15	2.77	3.13	3.01	2.86	3.03	2.97	3.00	(1.91)
17	E1-E4	2.22	2.21	2.46	2.30	2.07	2.18	2.34	2.43	2.27	2.34	2.35	2.33	(4.19)*
	E5-E8	3.10	2.90	3.15	2.82	2.89	2.94	3.12	3.02	2.91	2.93	2.84	2.17	(1.71)
18	E1-E4	2.57	2.41	2.26	2.36	2.26	2.10	2.54	2.50	2.30	2.50	2.50	2.09	(1.20)
	E5-E8	2.80	2.82	2.74	2.37	2.47	2.54	2.64	2.70	2.75	2.49	2.65	2.71	(.37)

APPENDIX C
(page 3 of 8)

Case	EM	Q1	II/1	NI/1	I/Q2	II/2	NI/2	I/Q3	II/3	NI/3	I/Q4	II/4	NI/4	F ratio
	E1-E4	2.82	2.76	2.82	2.72	2.78	2.75	2.96	2.89	2.70	2.84	2.94	2.75	(1.63)
	E5-E8	3.59	3.63	3.58	3.57	3.61	3.49	3.66	3.58	3.52	3.47	3.53	3.60	(.48)
20	E1-E4	2.17	2.16	2.25	2.16	2.29	2.11	2.20	2.31	2.25	2.27	2.28	2.18	(1.51)
	E5-E8	2.45	2.54	2.60	2.52	2.68	2.34	2.60	2.63	2.55	2.59	2.39	2.78	(3.20)*
21	E1-E4	1.94	1.88	1.93	1.85	1.79	1.77	2.00	2.04	1.86	2.04	2.07	1.92	(1.05)
	E5-E8	2.34	2.58	2.49	2.25	2.36	2.40	2.57	2.44	2.40	2.35	2.36	2.62	(1.61)
22	E1-E4	2.17	2.18	2.34	2.25	2.22	2.32	2.24	2.36	2.29	2.26	2.28	2.17	(2.31)
	E5-E8	2.75	2.86	2.84	2.86	2.83	2.71	2.81	2.93	2.76	2.75	2.72	2.84	(.89)
23	E1-E4	1.87	1.89	1.99	1.94	1.77	1.98	2.00	1.92	1.93	2.00	1.95	1.77	(3.30)*
	E5-E8	2.79	3.00	2.98	2.78	3.05	2.82	2.96	2.90	2.64	2.75	2.68	2.88	(2.10)
24	E1-E4	2.08	2.01	2.12	1.98	1.96	2.09	2.06	2.14	1.95	2.09	2.18	2.03	(2.38)
	E5-E8	2.65	2.84	2.67	2.72	2.78	2.61	2.88	2.81	2.64	2.69	2.64	2.72	(.79)
25	E1-E4	2.40	2.36	2.26	2.35	2.29	2.28	2.34	2.36	2.26	2.38	2.38	2.24	(.25)
	E5-E8	3.16	3.11	3.07	3.16	2.92	2.85	2.99	2.96	2.90	2.95	2.79	2.92	(.64)
26	E1-E4	3.22	3.18	3.19	3.24	3.26	3.11	3.11	3.12	3.07	3.03	3.04	2.99	(1.15)
	E5-E8	3.12	3.15	3.25	3.26	3.28	3.05	3.17	3.22	3.07	3.07	3.10	3.39	(3.08)*
27	E1-E4	3.08	3.09	3.09	3.12	3.04	3.09	3.06	3.08	2.95	3.10	3.09	3.08	(.53)
	E5-E8	3.17	3.17	3.13	2.96	3.05	2.99	2.92	2.79	2.85	2.90	2.96	3.02	(.53)
28	E1-E4	2.27	2.25	2.26	2.19	2.07	2.12	2.27	2.25	2.06	2.26	2.19	2.10	(.80)
	E5-E8	3.65	3.68	3.43	3.45	3.15	3.13	3.34	3.38	3.17	3.40	3.15	3.20	(.64)

ARI RPR 77-2

Item	FM	I/Q1	IL/I1	NF/I1	I/Q2	IL/I2	NF/I2	I/Q3	IL/I3	NF/I3	I/Q4	IL/I4	NF/I4	F ratio
29	E1-E4 E5-E8	3.47 3.97	3.48 3.71	3.51 3.66	3.41 3.86	3.43 3.67	3.48 3.63	3.35 3.86	3.42 3.77	3.34 3.42	3.26 3.79	3.42 3.67	3.29 3.68	(.55) (1.11)
30	E1-E4 E5-E8	2.22 2.92	2.27 2.90	2.30 2.90	2.24 2.89	2.23 3.01	2.24 2.84	2.35 3.01	2.42 2.96	2.30 2.73	2.38 2.91	2.43 2.78	2.20 3.01	(1.56) (1.56)
31	E1-E4 E5-E8	2.06 2.57	2.08 2.42	2.05 2.45	1.99 2.36	1.96 2.52	2.15 2.25	2.14 2.52	2.26 2.50	2.00 2.28	2.09 2.45	2.18 2.29	2.04 2.52	(3.06)* (1.83)
32	E1-E4 E5-E8	3.25 3.71	3.32 3.58	3.28 3.47	3.32 3.85	3.20 3.72	3.20 3.58	3.21 3.82	3.25 3.68	3.10 3.36	3.16 3.68	3.23 3.61	2.98 3.54	(1.44) (.79)
33	E1-E4 E5-E8	2.02 2.77	2.17 2.75	2.07 2.88	2.08 2.62	2.15 2.65	2.14 2.59	2.18 2.88	2.20 2.78	2.12 2.75	2.21 2.78	2.16 2.67	2.04 2.87	(1.25) (.57)
34	E1-E4 E5-E8	2.10 2.68	2.16 2.74	2.25 2.84	2.09 2.71	2.18 2.57	2.23 2.43	2.34 2.79	2.32 2.74	2.25 2.56	2.32 2.70	2.35 2.50	2.26 2.64	(1.26) (.97)
35	E1-E4 E5-E8	2.31 3.09	2.29 3.07	2.45 3.04	2.14 2.96	2.32 3.15	2.27 2.71	2.39 2.92	2.42 3.01	2.29 2.82	2.53 2.95	2.51 2.80	2.32 2.87	(2.89)* (1.38)
36	E1-E4 E5-E8	3.45 3.68	3.29 3.60	3.38 3.60	3.41 3.75	3.07 3.52	3.36 3.81	3.33 3.65	3.26 3.58	3.27 3.48	3.24 3.57	3.12 3.50	3.22 3.65	(1.36) (1.05)
37	E1-E4 E5-E8	2.37 2.68	2.40 2.72	2.41 2.82	2.34 2.70	2.35 2.59	2.46 2.56	2.55 2.81	2.59 2.65	2.46 2.58	2.51 2.75	2.49 2.71	2.43 2.63	(1.12) (.90)
38	E1-E4 E5-E8	2.40 2.90	2.51 2.76	2.59 2.92	2.36 2.83	2.52 2.84	2.41 2.74	2.53 2.85	2.52 2.83	2.39 2.74	2.56 2.78	2.58 2.83	2.43 2.86	(2.02) (.58)

APPENDIX C
(page 5 of 8)

Item	EM	I/Q1	II/1	NI/1	I/Q2	II/2	NI/2	I/Q3	II/3	NI/3	I/Q4	II/4	NI/4	F ratio
39	E1-E4	1.86	1.94	2.61	1.86	1.88	2.77	2.05	2.10	2.57	2.13	2.12	2.69	(4.56)*
	E5-E8	2.65	2.73	3.15	2.60	2.73	3.29	2.74	2.70	3.26	2.71	2.72	3.28	(.40)
40	E1-E4	2.33	2.46	2.45	2.32	2.35	2.54	2.25	2.39	2.41	2.31	2.22	2.23	(1.82)
	E5-E8	2.80	2.87	2.57	2.66	2.70	2.71	2.71	2.74	2.87	2.46	2.46	2.86	(2.82)*
41	E1-E4	2.30	2.13	2.46	2.27	2.04	2.34	2.30	2.16	2.38	2.28	2.16	2.17	(2.19)
	E5-E8	2.58	2.59	2.97	2.56	2.60	2.70	2.80	2.54	2.65	2.74	2.55	2.60	(2.22)
42	E1-E4	1.97	1.94	1.78	1.92	1.87	1.91	1.97	1.98	1.91	1.90	1.88	1.80	(1.00)
	E5-E8	2.08	2.18	2.12	2.14	2.03	1.84	2.24	2.16	2.10	2.15	1.96	2.08	(1.50)
43	E1-E4	3.16	3.06	3.05	3.09	3.12	2.74	3.07	3.15	2.62	3.02	2.99	2.80	(3.33)*
	E5-E8	3.56	3.47	3.34	3.32	3.56	3.09	3.50	3.53	2.99	3.48	3.42	3.26	(1.70)
44	E1-E4	2.53	2.36	2.29	2.29	2.36	2.10	2.44	2.62	2.16	2.43	2.42	2.22	(2.45)
	E5-E8	3.19	3.01	2.98	2.87	2.86	2.57	2.08	3.10	2.60	2.95	2.83	2.79	(1.55)
45	E1-E4	3.67	3.47	3.57	3.33	3.52	3.21	3.42	3.41	3.20	3.36	3.17	3.19	(3.59)*
	E5-E8	3.88	3.82	3.68	3.56	3.93	3.46	3.80	3.72	3.19	3.68	3.61	3.41	(3.17)*
46	E1-E4	2.67	2.46	2.46	2.35	2.48	2.30	2.54	2.73	2.25	2.52	2.53	2.27	(4.13)*
	E5-E8	3.31	3.09	2.97	2.95	3.09	2.63	3.17	3.08	2.73	3.00	2.90	2.90	(1.71)
47	E1-E4	2.79	2.63	2.54	2.45	2.52	2.34	2.64	2.78	2.39	2.61	2.66	2.33	(1.74)
	E5-E8	3.32	3.17	3.00	2.90	3.15	2.59	3.18	3.14	2.54	3.11	2.86	2.85	(2.89)*
48	E1-E4	2.66	2.56	2.51	2.43	2.38	2.33	2.62	2.73	2.39	2.55	2.59	2.33	(1.74)
	E5-E8	3.28	3.14	3.01	2.94	2.18	2.60	3.24	3.12	2.78	3.02	2.95	2.96	(2.34)

APPENDIX C
(page 6 of 8)

<u>ITEM</u>	<u>EM</u>	<u>I/Q1</u>	<u>II/1</u>	<u>NF/1</u>	<u>I/Q2</u>	<u>II/2</u>	<u>NF/2</u>	<u>I/Q3</u>	<u>II/3</u>	<u>NF/3</u>	<u>I/Q4</u>	<u>II/4</u>	<u>NF/4</u>	<u>F ratio</u>
49	E1-E4	2.75	2.58	2.65	2.59	2.46	2.40	2.59	2.73	2.52	2.60	2.65	2.42	(2.24)
	E5-E8	3.41	3.13	3.12	3.01	3.22	2.77	3.28	3.31	2.83	3.07	3.07	3.12	(3.22)*
50	E1-E4	2.63	2.48	2.50	2.34	2.31	2.19	2.46	2.66	2.27	2.45	2.50	2.24	(2.52)
	E5-E8	3.20	3.07	2.97	2.83	3.18	2.43	3.11	3.13	2.65	2.98	2.89	2.91	(3.70)*
51	E1-E4	2.65	2.53	2.58	2.45	2.45	2.29	2.54	2.70	2.30	2.52	2.59	2.36	(2.05)
	E5-E8	3.32	3.13	3.16	3.02	3.03	2.70	3.20	3.24	2.69	3.05	2.98	3.08	(3.16)*
52	E1-E4	2.51	2.33	2.39	2.31	2.35	2.18	2.44	2.61	2.18	2.35	2.45	2.14	(3.55)*
	E5-E8	3.13	2.96	2.94	2.81	2.99	2.34	3.06	2.98	2.46	2.85	2.81	2.65	(2.66)
53	E1-E4	2.36	2.24	2.38	2.21	2.22	2.15	2.30	2.40	2.25	2.29	2.37	2.10	(2.17)
	E5-E8	2.86	2.82	2.82	2.69	2.93	2.34	2.87	2.82	2.50	2.70	2.58	2.68	(2.29)
54	E1-E4	2.77	2.69	2.76	2.66	2.55	2.70	2.68	2.67	2.66	2.61	2.53	2.48	(.71)
	E5-E8	2.78	2.78	2.94	2.72	2.86	2.53	2.86	2.76	2.61	2.72	2.65	2.57	(1.67)
55	E1-E4	2.72	2.66	3.06	2.66	2.63	2.76	2.63	2.76	2.77	2.68	2.64	2.58	(3.33)*
	E5-E8	3.04	2.91	3.11	2.72	3.11	2.58	3.00	3.04	2.77	2.83	2.83	2.82	(2.82)*
56	E1-E4	3.21	3.12	3.33	3.07	3.08	3.18	3.08	3.12	3.11	3.09	2.94	2.97	(1.52)
	E5-E8	3.52	3.57	3.49	3.24	3.60	3.13	3.43	3.50	3.25	3.31	3.28	3.34	(2.06)
57	E1-E4	2.02	2.04	1.97	1.99	1.91	2.03	2.11	2.23	2.08	2.14	2.26	2.01	(2.26)
	E5-E8	2.75	2.78	2.74	2.65	2.67	2.81	2.98 2.89	2.89 2.77	2.77	2.85	2.68	2.90	(.87)
58	E1-E4	2.06	2.04	2.08	2.14	2.05	1.98	2.18	2.20	2.15	2.22	2.18	2.03	(1.26)
	E5-E8	2.67	2.68	2.75	2.60	2.65	2.57	2.85	2.79	2.69	2.68	2.65	2.81	(1.09)

APPENDIX C
(page 7 of 8)

<u>Item</u>	<u>EM</u>	<u>I/Q1</u>	<u>I1/1</u>	<u>NF/1</u>	<u>I/Q2</u>	<u>I1/2</u>	<u>NF/2</u>	<u>I/Q3</u>	<u>I1/3</u>	<u>NF/3</u>	<u>I/Q4</u>	<u>I1/4</u>	<u>NF/4</u>	<u>F ratio</u>
59	E1-E4 E5-E8	1.89 3.07	1.97 3.11	1.98 3.14	1.85 3.01	1.92 3.02	1.94 2.99	2.12 3.23	2.21 3.17	2.05 3.03	2.14 3.08	2.24 2.94	1.98 3.19	(1.82) (.91)
60	E1-E4 E5-E8	2.21 2.82	2.24 2.73	2.44 2.86	2.22 2.64	2.17 2.96	2.27 2.63	2.29 2.74	2.43 2.86	2.29 2.70	2.33 2.58	2.34 2.62	2.15 2.72	(3.70)* (1.35)
61	E1-E4 E5-E8	2.70 3.41	2.75 3.28	2.80 3.44	2.76 3.44	2.72 3.28	2.70 3.23	2.72 3.34	2.78 3.30	2.68 3.32	2.77 3.29	2.74 3.28	2.67 3.44	(.78) (.86)
62	E1-E4 E5-E8	2.09 2.81	2.08 2.88	2.24 3.00	2.20 2.95	2.08 2.84	2.22 2.67	2.19 2.89	2.34 2.91	2.29 2.79	2.20 2.79	2.20 2.72	2.12 2.91	(2.17) (1.66)
63	E1-E4 E5-E8	2.51 2.96	2.52 2.92	2.98 3.25	2.47 2.78	2.52 3.10	2.67 2.77	2.42 2.76	2.65 3.07	2.65 2.91	2.48 2.68	2.46 2.71	2.41 2.84	(5.31)* (2.46)
64	E1-E4 E5-E8	1.98 2.57	2.03 2.70	2.05 2.67	2.04 2.44	2.08 2.77	2.04 2.41	2.11 2.71	2.22 2.77	2.10 2.51	2.10 2.52	2.13 2.49	1.93 2.77	(1.39) (3.06)*
65	E1-E4 E5-E8	2.36 3.10	2.33 3.14	2.36 3.10	2.37 3.07	2.30 3.10	2.28 2.92	2.42 3.19	2.53 2.97	2.30 2.85	2.43 2.95	2.48 2.84	2.31 2.93	(1.30) (1.01)
66	E1-E4 E5-E8	2.36 3.32	2.37 3.24	2.35 3.38	2.20 3.34	2.25 3.04	2.28 3.13	2.34 3.38	2.48 3.18	2.29 3.07	2.38 3.09	2.46 3.04	2.22 3.11	(1.36) (.96)
67	E1-E4 E5-E8	2.61 2.96	2.73 2.92	2.71 3.01	2.69 2.74	2.66 2.87	2.70 2.83	2.74 3.07	2.73 2.93	2.69 2.83	2.81 2.90	2.75 2.90	2.66 2.94	(1.33) (1.20)
68	E1-E4 E5-E8	2.76 3.14	2.84 3.06	2.80 3.11	2.73 3.09	2.76 3.25	2.84 3.07	2.76 3.12	2.83 3.06	2.73 2.92	2.86 3.06	2.83 3.05	2.78 2.97	(.92) (.79)

ARI RPR 77-2

APPENDIX C
(page 8 of 8)

Item	EM	I/Q1	II/1	NF/1	I/Q2	II/2	NF/2	I/Q3	II/3	NF/3	I/Q4	II/4	NF/4	F Ratio
69	E1-E4	2.18	2.19	2.26	2.36	2.21	2.17	2.28	2.43	2.33	2.34	2.39	2.18	(2.92)*
	E5-E8	2.72	2.71	2.75	2.68	2.79	2.70	2.86	2.90	2.64	2.75	2.62	2.64	(.92)
70	E1-E4	2.46	2.51	2.53	2.52	2.48	2.51	2.60	2.71	2.46	2.59	2.66	2.47	(2.12)
	E5-E8	3.16	3.03	3.08	3.11	3.16	3.15	3.14	3.26	3.06	3.13	3.02	3.02	(.77)
71	E1-E4	2.68	2.60	2.53	2.46	2.53	2.40	2.59	2.77	2.44	2.55	2.62	2.43	(1.77)
	E5-E8	3.09	3.06	3.05	2.93	3.24	2.65	3.07	3.15	2.76	2.97	2.87	2.86	(3.44)*
72	E1-E4	2.69	2.61	2.69	2.55	2.60	2.57	2.61	2.80	2.50	2.61	2.68	2.43	(3.18)*
	E5-E8	3.02	3.06	3.01	2.92	3.09	2.71	3.05	3.14	2.72	2.93	2.86	2.86	(1.94)
73	E1-E4	2.25	2.20	2.26	2.20	2.15	2.27	2.30	2.43	2.26	2.30	2.38	2.17	(2.77)
	E5-E8	2.70	2.59	2.74	2.59	2.81	2.46	2.72	2.74	2.47	2.65	2.54	2.57	(2.43)
74	E1-E4	2.76	2.74	2.82	2.71	2.80	2.78	2.73	2.83	2.64	2.70	2.71	2.62	(1.66)
	E5-E8	3.10	3.05	3.17	2.90	3.17	3.14	3.11	3.01	2.88	2.97	2.94	2.88	(2.28)
75	E1-E4	2.13	2.14	2.16	2.12	2.09	2.18	2.21	2.32	2.24	2.22	2.27	2.13	(1.05)
	E5-E8	2.70	2.64	2.67	2.63	2.81	2.63	2.74	2.83	2.54	2.61	2.52	2.68	(1.54)
76	E1-E4	1.78	1.74	1.74	1.82	1.74	1.72	1.85	1.92	1.97	1.95	1.94	1.76	(1.85)
	E5-E8	2.11	2.09	2.15	2.15	2.28	1.93	2.16	2.34	2.03	2.20	2.08	2.29	(2.64)

Feedback Variations. Data which follow are in the following order: Civilian Coach/Quarter 1, Military Monitor/Quarter 1, Structured Sequence/Quarter 1, No Feedback/Quarter 1; Civilian Coach/Quarter 2, and so on to No Feedback/Quarter 4. The F ratio is in parenthesis. Degrees of freedom for the treatment by quarter interaction are 9 and 24. A statistically significant (.01 level) F ratio is 3.25 or above. Only items achieving significance at the .01 level are presented.

Item	EM	CC/1	MM/1	SS/1	NF/1	CC/2	MM/2	SS/2	NF/2	CC/3	MM/3	SS/3	NF/3	CC/4	MM/4	SS/4	NF/4	F Ratio
26	E5-E8	3.11	3.06	3.22	3.25	3.35	3.47	3.21	3.05	3.32	3.06	3.26	3.07	3.11	2.95	3.12	3.39	(3.42)
50	E5-E8	3.04	2.96	3.22	2.97	3.36	2.90	2.90	2.43	3.18	3.13	3.08	2.65	3.00	3.23	2.77	2.91	(3.61)
52	E5-E8	3.00	2.82	3.13	2.94	3.17	2.90	2.75	2.34	3.09	3.06	2.98	2.46	2.90	3.11	2.67	2.65	(3.56)
62	E1-E4	2.15	2.04	2.07	2.25	2.40	2.20	2.03	2.22	2.37	2.16	2.26	2.29	2.17	2.25	2.19	2.12	(3.45)

APPENDIX D

MEANS AND SIGNIFICANCE TESTS FOR UNIT INDICATORS OVER QUARTERS AND FEEDBACK GROUPS (page 1 of 2)

Data are presented in the following order for each unit indicator: For each quarter, means for Feedback Group I (relatively high command stability), Feedback Group II (relatively high command turnover), the No Feedback group, and total means over all groups; degrees of freedom within subjects/error within; and the F ratio.

Unit Indicator	Quarter 1		Quarter 2		Quarter 3		Quarter 4		df	F				
	FG I	II	FG I	II	FG I	II	FG I	II						
1. Ratio complaints to IG	.037	.045	.076	.047	.019	.020	.033	.044	.016	.009	.004	.078	6/84	1.277
2. No. inop. vehicles	.035	.021	.019	.025	.017	.013	.017	.017	.016	.018	.024	.020	6/102	<1.000
3. No re-enlistments	13.87	15.47	13.30	12.07	13.13	11.15	14.60	13.53	10.65	13.20	16.47	11.55	6/84	<1.000
4. Ratio AR Cmd Medal	.024	.040	.087	.013	.028	.065	.030	.018	.075	.022	.024	.025	6/81	1.506
5. Ratio Div Cert Achiev	.056	.036	.183	.083	.016	.022	.217	.019	.109	.019	.006	.017	6/69	<1.000
6. Ratio Bd Cert Achiev	.074	.109	.008	.083	.004	.011	.023	.000	.081	.035	.019	.007	6/63	2.004
7. Ratio Bn Cert Achiev	.165	.147	.163	.119	.024	.151	.087	.072	.092	.196	.048	.014	6/57	<1.000
8. Ratio 1st commendation	.164	.629	.277	.136	.352	.155	.141	.179	.273	.194	.355	.170	6/69	1.429
9. Ratio man-days ABCI	.429	.325	.1	.268	.189	.638	.233	.171	.644	.502	.400	.484	6/96	<1.000
10. Ratio co Art 15s	.308	.308	.236	.235	.229	.214	.224	.199	.188	.257	.231	.195	6/93	<1.000

APPENDIX D (page 2 of 2)

ARL RPR 7/7/82

Unit Indicator	Quarter 1		Quarter 2		Quarter 3		Quarter 4		df	F
	FG I	II NF	FG I	II NF	FG I	II NF	FG I	II NF		
11. Ratio bn Art lbs	.080	.126 .038	.067 .091 .035		.059 .074 .043		.076 .076 .037		6/90	1.007
12. Ratio CMS	.036	.048 .021	.089 .050 .050		.047 .026 .047		.044 .073 .033		6/90	1.456
13. Ratio MP rps	.213	.170 .239	.159 .173 .210		.222 .221 .226		.130 .190 .301		6/81	1.448
14. Ratio MP rpts, drugs	.035	.038 .033	.021 .044 .070		.059 .025 .091		.054 .050 .089		6/84	1.079
15. Ratio MP rpt alcohol	.053	.031 .028	.027 .034 .031		.078 .050 .039		.044 .062 .053		6/87	<1.000
16. Ratio MP rpts race	.000	.000 .000	.002 .007 .003		.001 .000 .024		.000 .000 .000		6/84	1.718
17. Ratio rpt serious icdt	.026	.008 .025	.018 .010 .074		.077 .030 .051		.071 .018 .021		6/69	1.299
18. Ratio dr/alc rehab	.265	.285 .406	.191 .165 .210		.190 .130 .206		.170 .156 .228		6/81	<1.000
19. Ratio adm discharges	.047	.042 .058	.035 .030 .026		.074 .020 .067		.085 .056 .051		6/90	1.203
20. Ratio enr HS empl crs	.192	.176 .221	.217 .189 .131		.217 .284 .191		.315 .269 .185		6/90	1.548
21. Ratio enr local univ	.035	.104 .060	.049 .043 .025		.055 .077 .096		.072 .086 .086		6/78	1.431
22. Ratio enr univ cor crs	.044	.046 .047	.019 .004 .036		.027 .017 .045		.015 .013 .038		6/60	<1.000